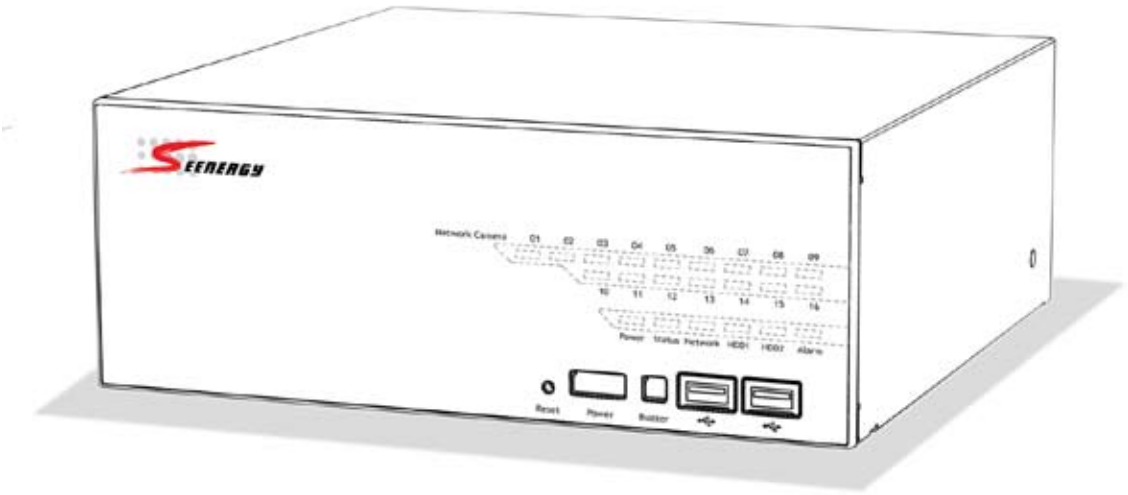
Connecting Digital Vision

Network Video Recorder

User's Manual v1.5.0

Model: **SVR-104/108/SVR-116**



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System Requirements

The following are minimum system requirements for the system to operate Embedded Network Video Recorder (ENVR):

Operating System

Microsoft® Windows® 2000 Professional, Windows® XP Professional (32 bit) or Windows® Server 2003 (32 bit)

Browser

Microsoft Internet Explorer 6 or above

CPU

Minimum Intel® Pentium® 4 2.4 GHz or higher (Dual Core is recommended)

RAM

Minimum 1 GB of RAM, 2GB or above is recommended

Network

Minimum 10/100 Ethernet (Gigabit Ethernet is recommended)

Graphics Adapter

AGP or PCI-Express, minimum 1024×768, 16 bit colors.

(We highly recommend to work above the 1024 x 768 resolution to get the full experience of the software)

- ***Make sure your display DPI setting is set to default at 96DPI***
- ***To set DPI value, right-click on desktop, choose "Settings" tab >> "Advanced" >> "General"***

Contents Inside the Installation CD

- Adobe Acrobat Reader
- Smart Device Search Utility
- Pi-Vu Central Basic CMS software
- NVR Media Player
- User's Manual
- Quick installation Guide
- Datasheet

Product Description

The Embedded Network Video Recorder is designed for use within a surveillance system, and performs recordings and playbacks pictures from network cameras in the system. It is a recording device using a hard disk drive to record camera pictures instead of using video tapes so that pictures recorded by repeated overwriting will not experience deterioration of the recorded picture quality. Up to 4 (for SVR-104) or 8 (for SVR-108) or 16 (for SVR-116) cameras can be connected via a network and it is possible to record their camera pictures. It is possible to perform the settings or operate the NVR using a web browser installed on a PC connected to a network, or remote controller. Recorded video can be played back from remote site by a PC. Up to 4 PCs (web browsers) can access this unit concurrently and it is possible to perform the settings and operate this unit. The NVR is compatible with most major brand cameras and its ability to automatically search and fnd the available cameras on the network can greatly reduce the user effort when expanding the system.

- **Advance PTZ Control**
- **Various Types Event Alerts**
- **Pure Web Based Administration**
- **Linux-embedded Operating System**
- **Export Recorded Videos to AVI**
- **Compatible with Major Brand Cameras**
- **High Quality Live/Playback Videos**
- **Smart Camera Search**

Install Hard Disk

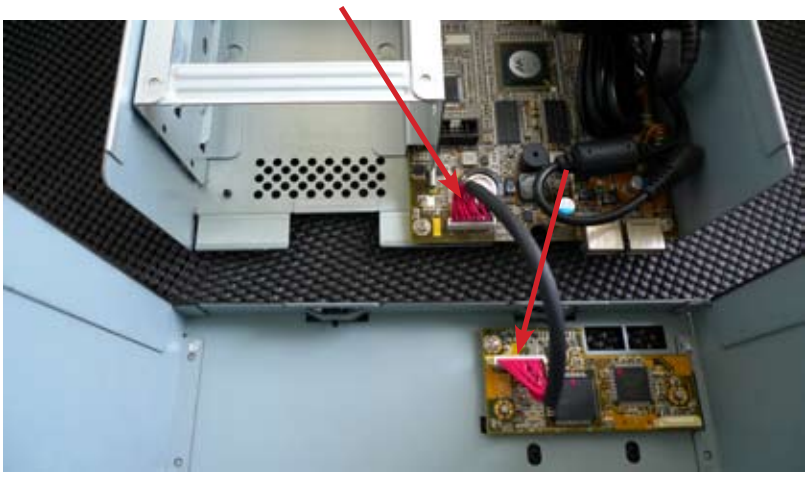
Start by removing the screws on the side:

Push the top housing forward

Then lift it up

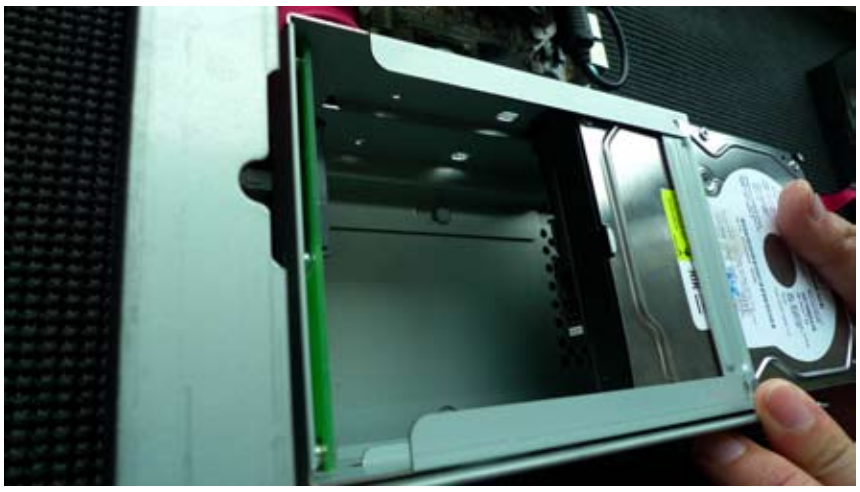
- *The NVR supports SATA I or SATA II hard disks*
- *The NVR supports max. 1.5TB per hard disk and it supports total of 2 hard disks (3TB)*

There is a cable connected between the fron LED board and the main board



You can remove it from the main board or simply put the top housing on the side like shown below:

Next, slide the hard drive into the tray:



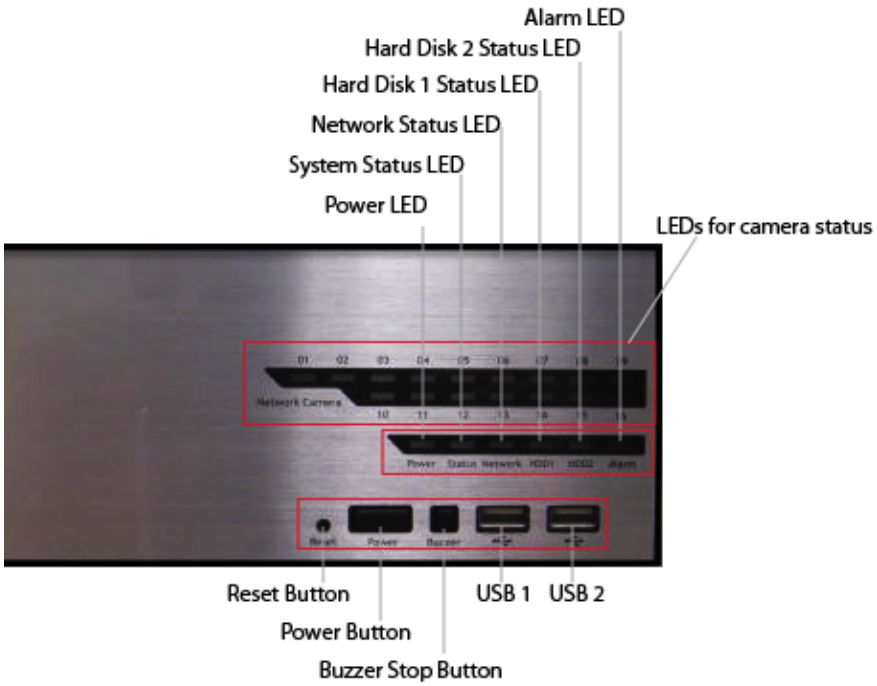
Make sure the SATA connectors are aligned with each other correctly

Secure the hard drive with the tool-less screw provided in the box

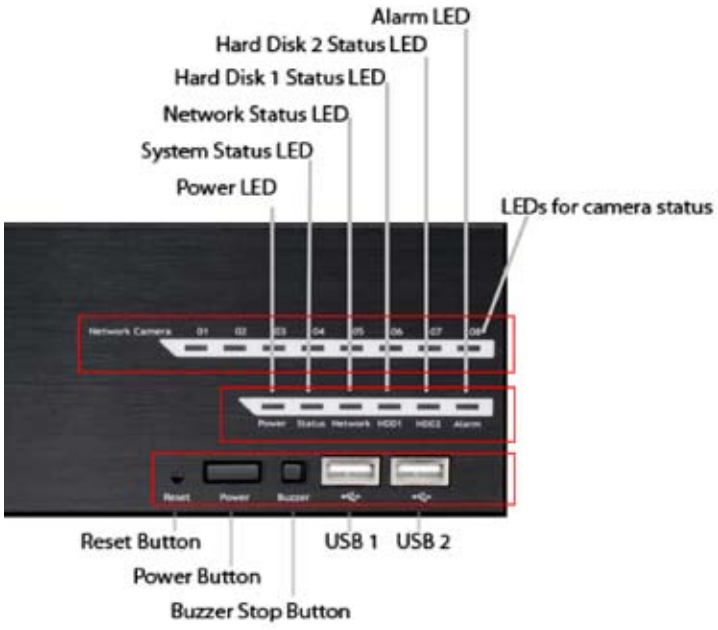
Place the top housing back and secure it with the bottom housing

Hardware Illustration (Front)

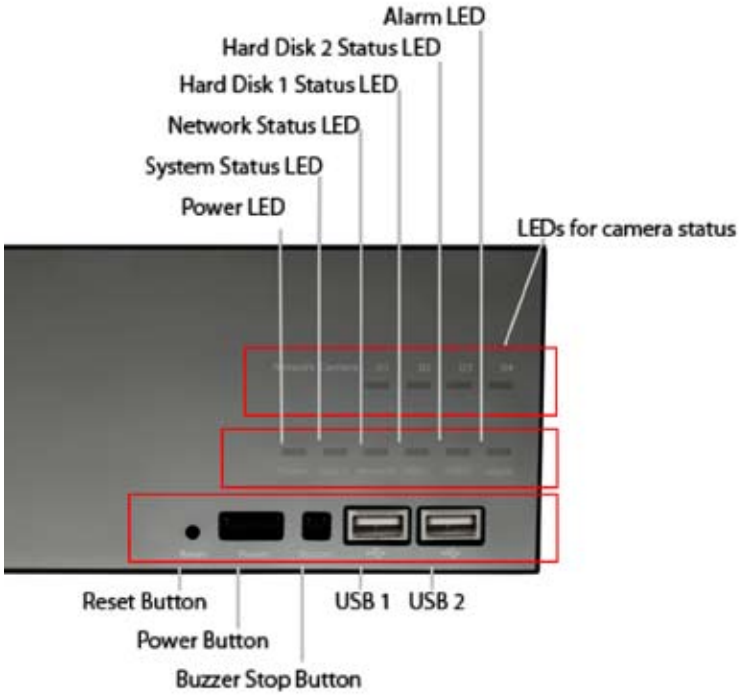
16 Channel



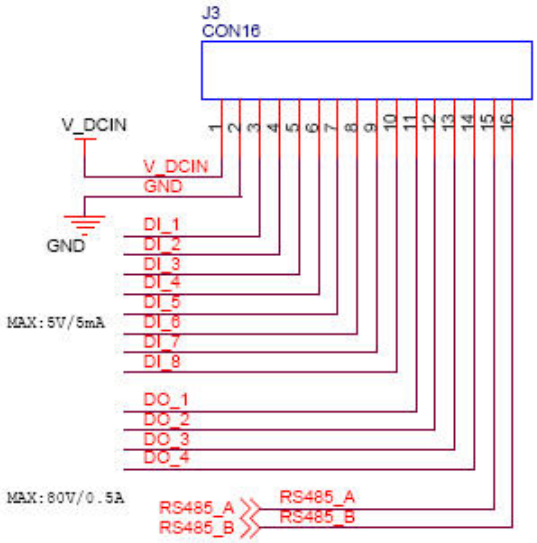
8 Channel



4 Channel


Alarm LED
Hard Disk 2 Status LED
Hard Disk 1 Status LED
Network Status LED
System Status LED
Power LED
LEDs for camera status
Reset Button
Power Button
Buzzer Stop Button
USB 1
USB 2

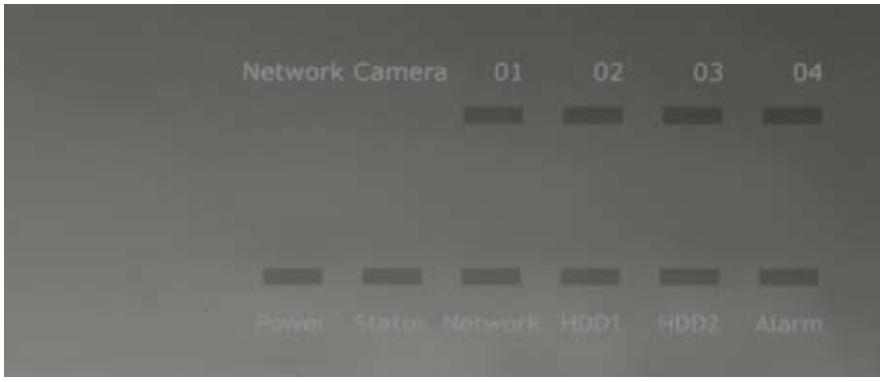
I/O Ports and RS-485 (Rear)



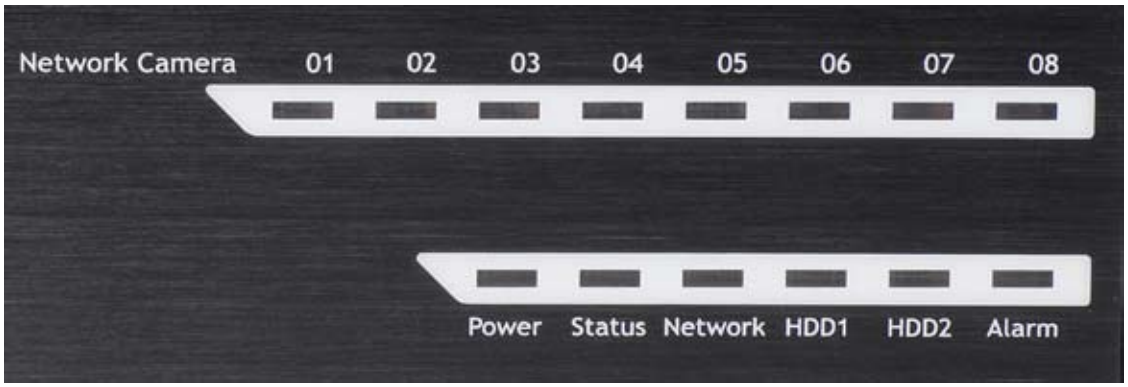
Pin	Signal
1	DCIN
2	GND
3~10	Alarm input
11	Out1
12	Out2
13	Out3
14	Out4
15	RS485+
16	RS485-

LEDs Definition

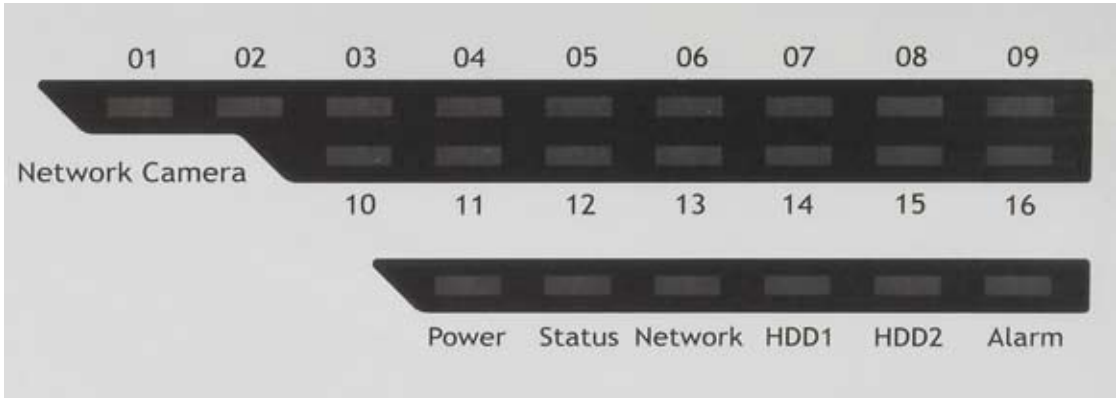
4 Channel



8 Channel



16 Channel



LEDs Definition

HDD x 2	Green	Solid green when the hard disk is mounted and being accessed
	Red	Solid red for disk fail
	Amber	Solid amber when disk is full Blinking when recycling
Network	Amber	Solid amber for activity on a 1G bps network.
	Green	Solid green for activity on a 10/100 Mbps network.
Status	Amber	Blinking during firmware upgrade
	Green	Shows solid green for normal operation. Blinking green when firmware upgrade is done
	Red	Flashes red for failed firmware upgrade.
Power	Green	Normal operation
	Red	System off (power adapter remains plugged in)
	Amber	Blinking amber indicating device is initializing
Alarm	Red	Blinking when an alarm occurs
	None	When alarm is reset

Camera LED	Green	Solid green, live connected with no event or recording activity
	Amber	Blinking amber, manual or event recording is being performed
	Amber	Solid amber, schedule or continuous recording is being performed
	Red	Recording is set but no video from camera

Connect to the NVR

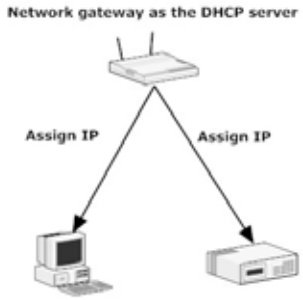
There are various ways you can connect to the NVR and below are the suggested methods for different network setup:

- The NVR is placed in a network with a DHCP server: Connect to the NVR by using **"SEEnergy Device Search" Utility**
- The NVR is placed in a network without DHCP server (or you are connecting to it directly): **Access NVR with its default IP**

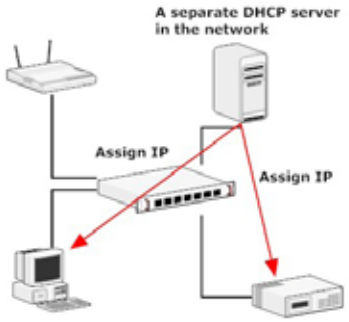
Use SEEnergy Device Search Utility

If the NVR is placed in a corporate network or a local area network where a DHCP server is already presented, install the "SEEnergy Device Search" utility on the CD from a computer that is on the same network and locate the NVR with its IP address that is assigned by the top-level DHCP server.

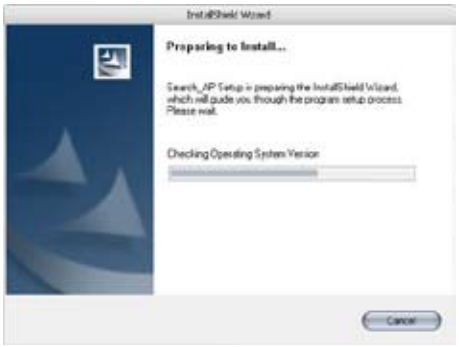
1.



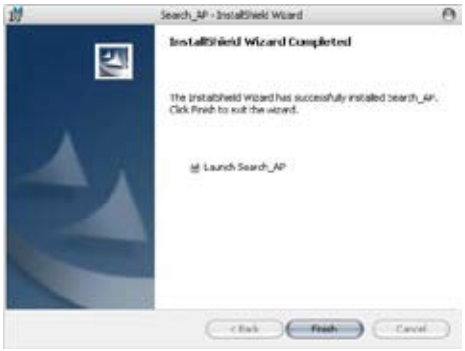
2.



To begin, launch the "SEEnergy Deivce Search" utility from the CD and proceed with the installation:



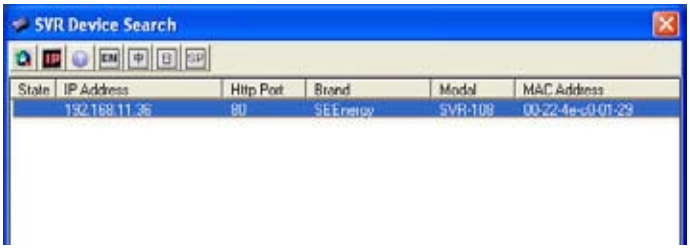
Once the installation is complete, check the "Launch the Search AP" option and click "Finish":



The search should start automatically and its status should be displayed:

The NVR should be located and its IP address should be displayed:

Double-click on it and the program should automatically access the NVR's web administration page from your default browser



You may change NVR's IP address by click on the button highlighted below.

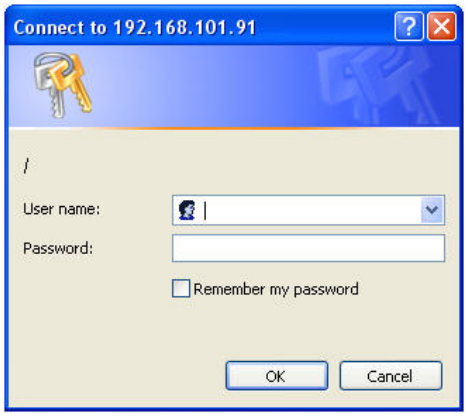
You will be prompted for the NVR's login information before proceeding to change device's IP address.

You may click on the button highlighted below to perform search again. Or double-click on any of the search results to access NVR's web administration page

perform search again

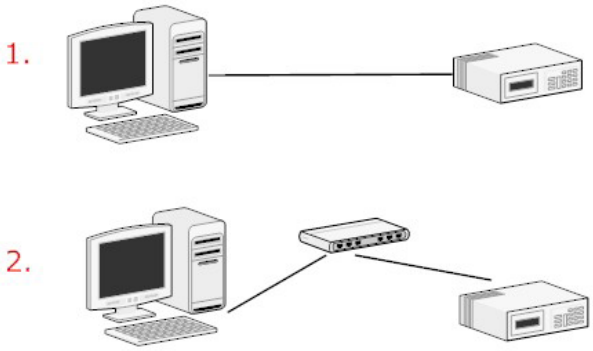
access NVR's web administration page

You should be prompted for the NVR's username and password. Enter its default username "**admin**" and password "**admin**" and then click"OK" to enter the system

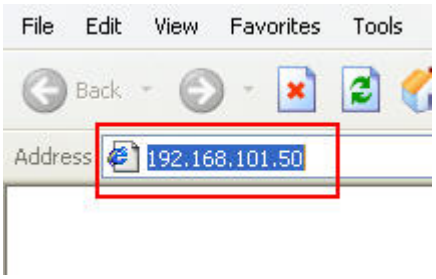


Access NVR with its default IP address

The NVR comes with a pre-configured static IP "**192.168.101.50**". However, it is only used when there is no DHCP server presented in the network. The NVR will turn on its DHCP server function and act as the DHCP server in the network. To connect to the NVR, use a PC that is on the same network over a switch or hub, or connect the PC directly to the NVR using a crossover CAT5 Ethernet cable.



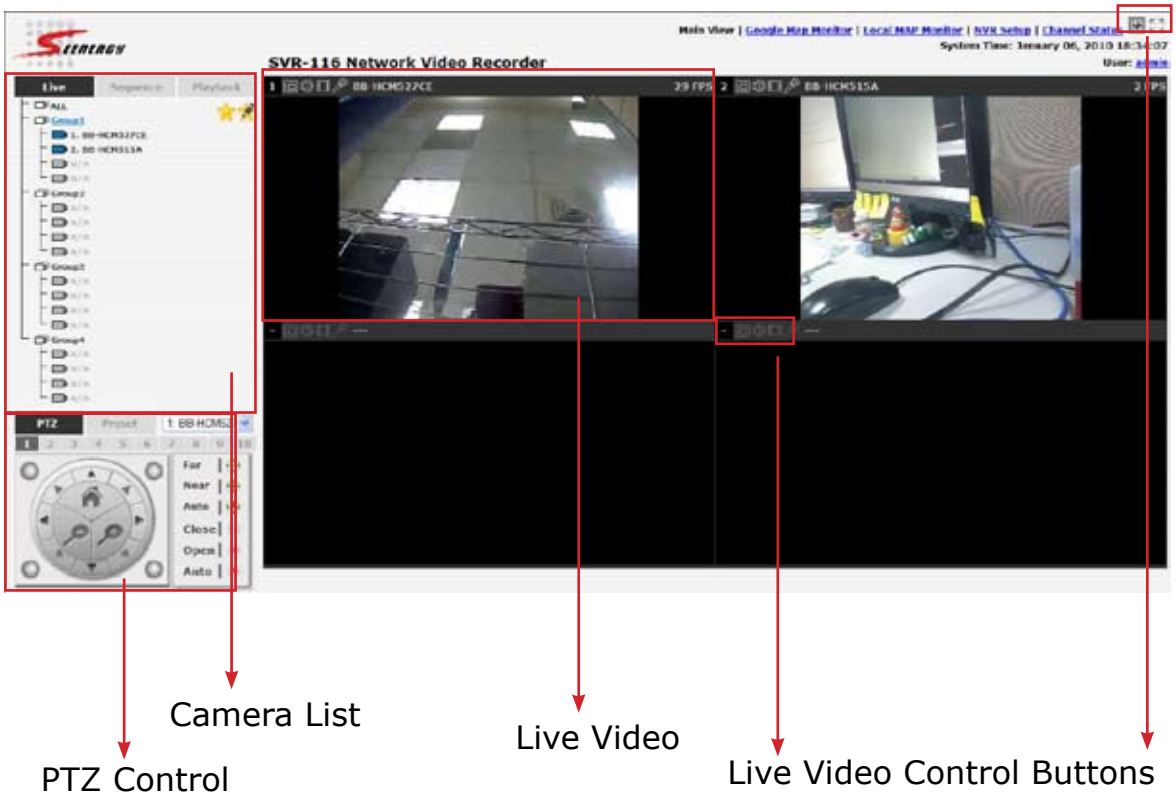
The PC that is connected directly to the NVR (or within the same local area network) should receive an IP from it. Simply access the NVR from your web browser with its IP address



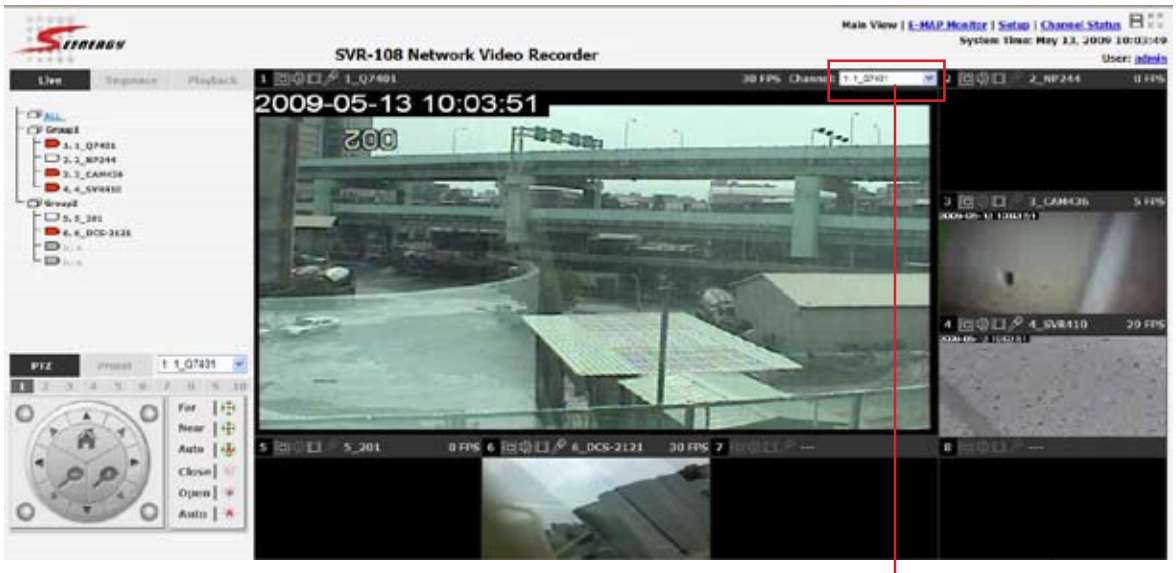
Again, you should be prompted for the username and password. Enter its default username "**admin**" and password "**admin**" and then click"OK" to enter the system

1. Live View

SVR-116



SVR-108



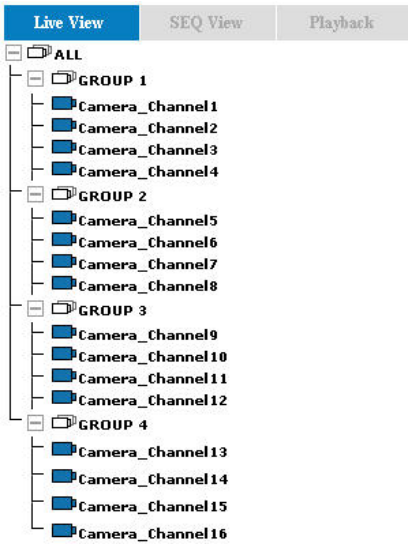
The 8 channel NVR comes with a 8-video split window view with one video displays on a larger window. Select a channel from the drop-down menu to display its video on the larger split window. You can also double-click on any of the smaller one to display its video to the larger window.

SVR-104

The "Live View" page provides the following functions:

- Retrieve camera's video stream
- Retrieve camera's status
- Perform Live Sequence Viewing
- PTZ Control
- Perform PTZ Preset Sequence viewing
- Perform manual recording
- Take snapshot
- Receive audio of a video stream
- Send audio
- Control "Buzzer"
- Change web UI display language

1.1 Retrieve camera's video stream



The camera list is expanded and displayed on the Live View page.

- Click "All" to display videos in the 8-video mode (SVR-108) or 16-video mode (SVR-116)
- Click on a "Group" (ex. Group 1) to display videos from cameras under that group in quad view
- Click on any camera to display video in single-view mode

1.2 Retrieve camera's status

The camera list can show each camera's current status. Each status is represented with different colors and their meanings are explained on the left

Camera is connected

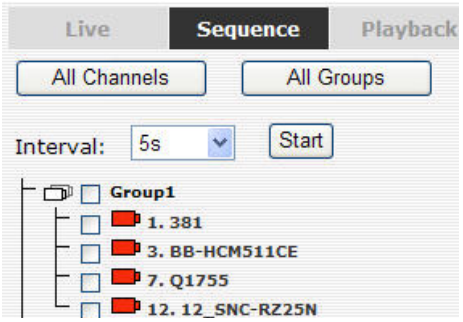
Camera is NOT connected

Camera is current performing recording

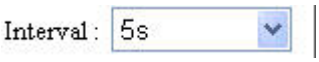
1.3 Perform Sequence Viewing

Sequence view is a function that allows you to view multiple video streams from certain cameras in sequence automatically without having to select them one by one.
To perform sequence view, select "SEQ View" from the upper-left hand corner

Next, select one or more camera(s) or camera group(s) for sequence viewing



Then select dwell interval from the drop-down menu



Finally click "Start" to start sequence viewing

** Click "All Channels" to quickly select all available channels and start sequence view in single-view mode.*

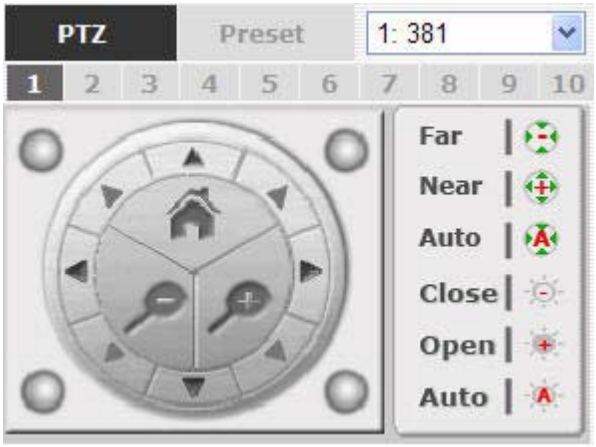
Click "All Groups" to quick select all available groups and start sequence view in quad-view mode

Or simply select the desired channels and press "Start" to start sequence view

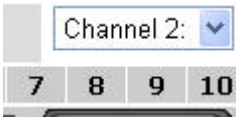
The "All Group" button is not available in 4Ch NVR as it only has one group

1.4 PTZ Control

PTZ control provides functions to pan, tilt, zoom a PTZ camera as well as the ability to adjust camera focus and iris



Camera(s) that are currently being selected for live viewing will be listed in the PTZ drop-down menu. Simply select a camera then use the PTZ control panel to control the camera

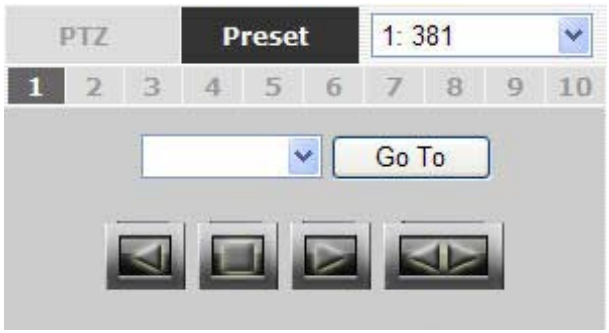


The bar shown below allows you to control the pan/tilt speed

1.5 Perform PTZ Preset Viewing

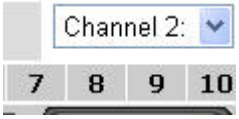
There are three functions provided in the "Preset" section:

- Perform preset point viewing of a particular camera
- Auto pan a particular camera
- Perform preset point sequence viewing

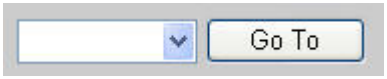


Preset Point Viewing

Start by selecting a PTZ camera from the drop-down list:



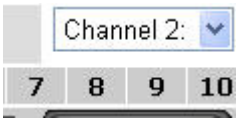
Its available PTZ preset points will be listed in the drop-down list shown below:



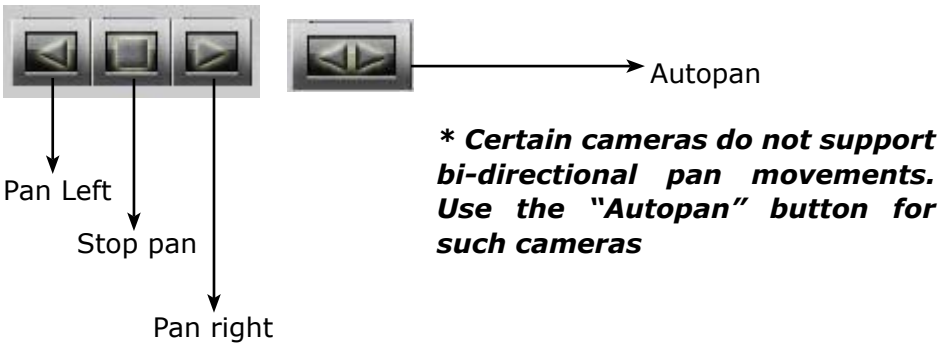
Select a preset position from the drop-down list and click "Go to" to move the live view to that position

Auto Pan Viewing

Start by selecting a PTZ camera from the drop-down list:



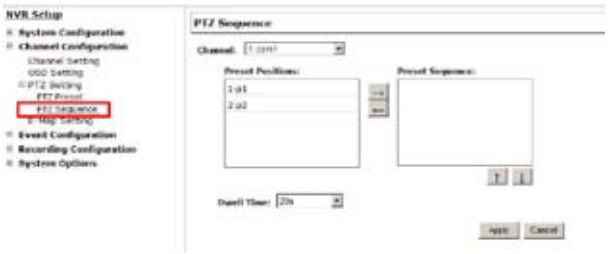
Use the Auto Pan control buttons to pan right, left and stop auto pan



**** Certain cameras do not support bi-directional pan movements. Use the "Autopan" button for such cameras***

Preset Point Sequence Viewing

This function allows you to view multiple preset points from a video of a camera without having to select them one by one. Once you have defined the prefered preset points in "**Channel Configurations**" >> **"PTZ Setting"** >> "**PTZ Sequence**" under the "**Setup**" menu, click "Start" in the lower-left hand corner in Live View under "Preset" and the recorder will begin to display videos from those preset points in sequence automatically until you click "Stop"

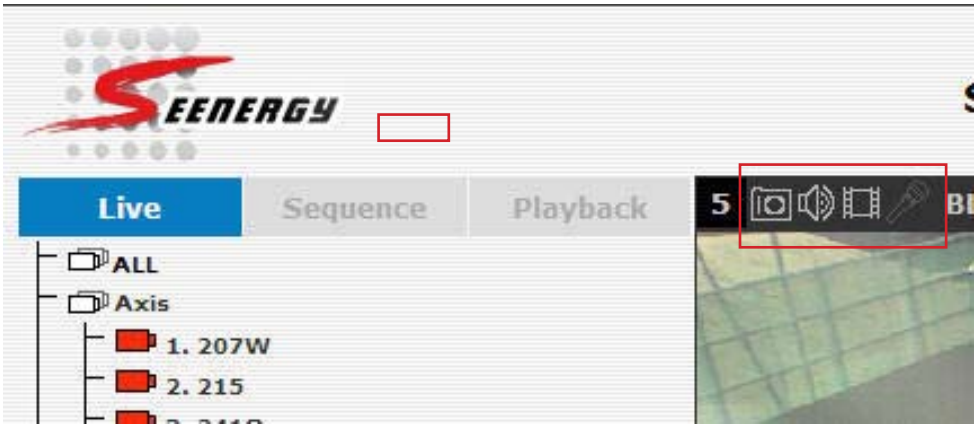


"In the Setup page"

In the Live View

1.6 Live Video Control Buttons

Each live video window comes with control buttons with functions described below:



Take a snapshot of a live video

Turn on/off audio of a live video

Start/stop recording of a live video (manual recording)

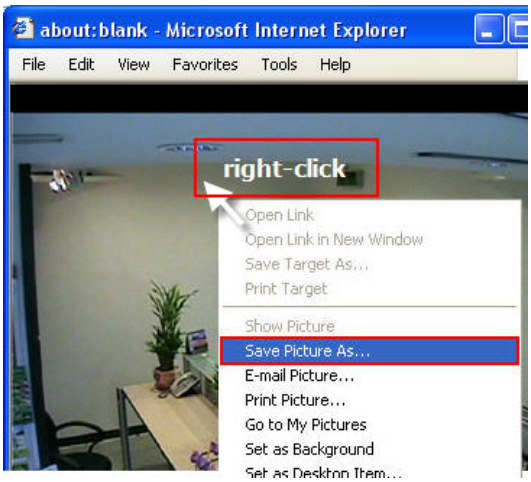
Audio post function

Full screen view of a live video

Display video in its original ratio

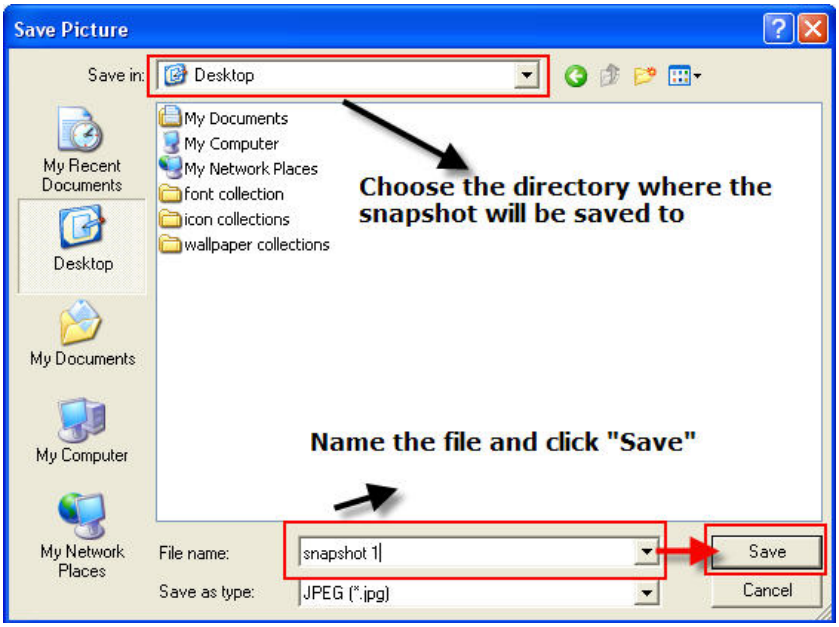
Take a snapshot of a live video

To take a snapshot of a live video, click the button and the snapshot of the video will be displayed in a pop up window shown like below



Right-click anywhere on the image and select "Save Image as" from the pull-down menu

In the pop up dialog, name the image file and choose which directory the image will be saved to and click "Save"



Full Screen View of a Live Video

To view a video in full screen, click the button. To exit full screen video, double-click anywhere on the video.

Turn On/Off Audio of a Live Video

You can retrieve audio from a particular camera. Simply click the button to do so.

The button will show in different color once the audio is turned on. Click on it again to turn off audio.

Start/Stop Recording of a Live Video

You can manually start or stop recording of a live video by using the button.

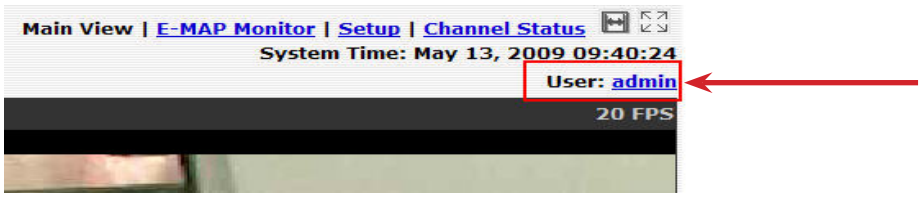
The button will show in different color once the recording is started manually. Click on it again to stop recording.

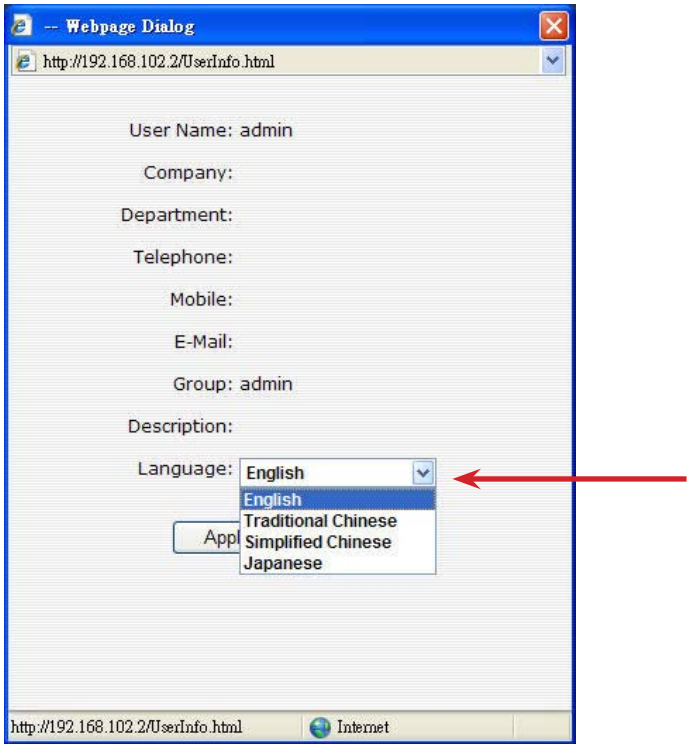
Audio post

This function allows user to speak from a PC through a microphone and the audio can be played at the camera side if it has a speaker connected to it.

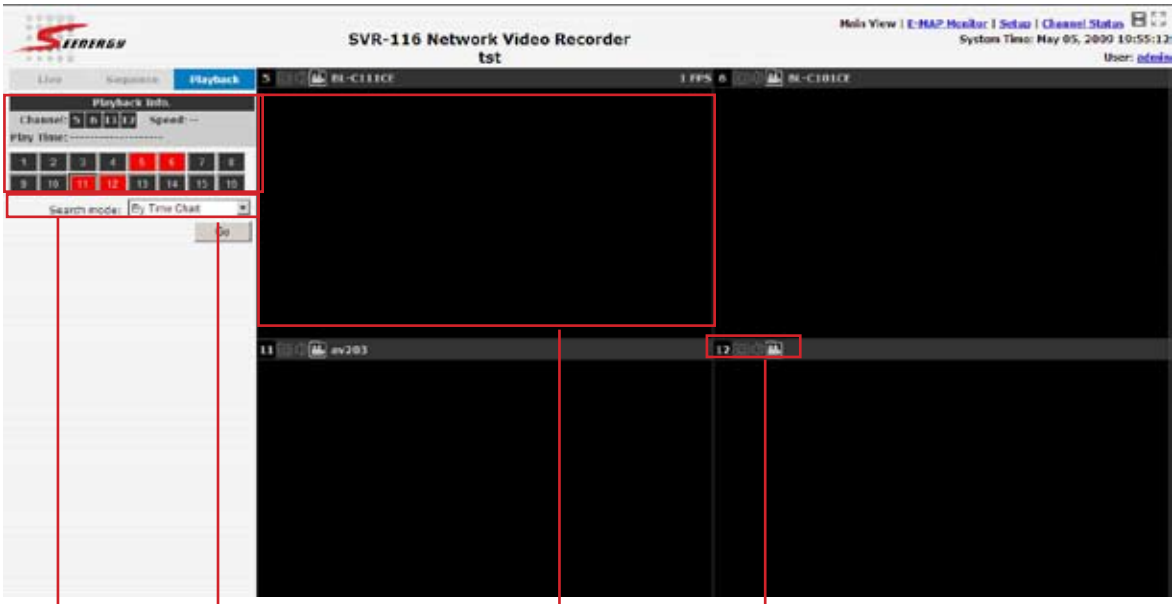
1.7 Change Web UI Display Language

You can change the web UI display language from the current login username link located at the upper-right hand corner. Click on the link opens up a new window which displays detail information about the user as well as a drop-down menu which lets you change the displyay language.





2. Playback



Playback is a function that allows you to play one or more videos that were previously recorded by a chosen recording method or due to an event trigger. The NVR offers synchronized playback from up to 4 channels and various types of search methods are provided to help you find the footage you need quickly.

You can turn on or off the audio of a recorded video at your choice if audio was also recorded during the recording of the video.

Playback video can be viewed in full screen and snapshots can be taken and saved during a video playback.

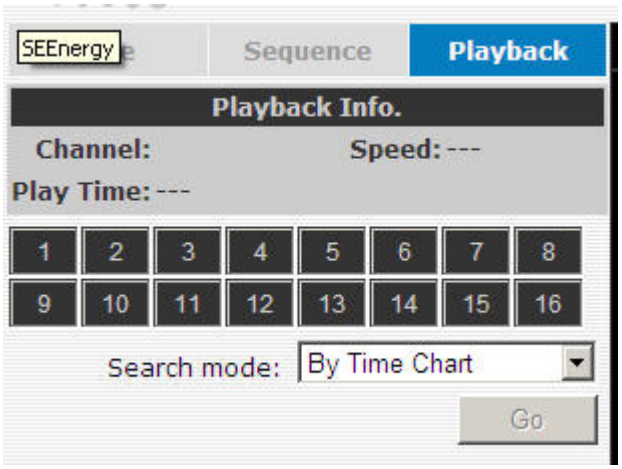
2.1 Methods to Search Playback Videos

The NVR offers three methods to quickly help users find videos that were previously recorded:

- Search by time: *Specifiy a time range and search videos recorded within that range*
- Search by event: *Find videos that were recorded due to event triggers*
- Play by start time: *Enter a specific time a video was recorded to start playing back the video*

Search by time chart

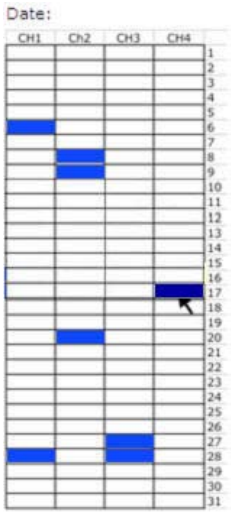
- Start by selecting which channel(s) you would like to perform a search on:



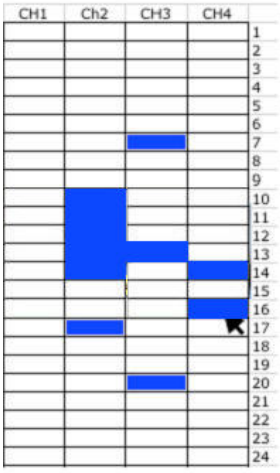
** Selected channels will be marked in red*

- Select "Search by time chart" from the "Search Method" drop-down list and click "Go" to start the search:

- Results will then be displayed in a "Date/Channel" table and boxes marked in blue represent videos found in those dates:

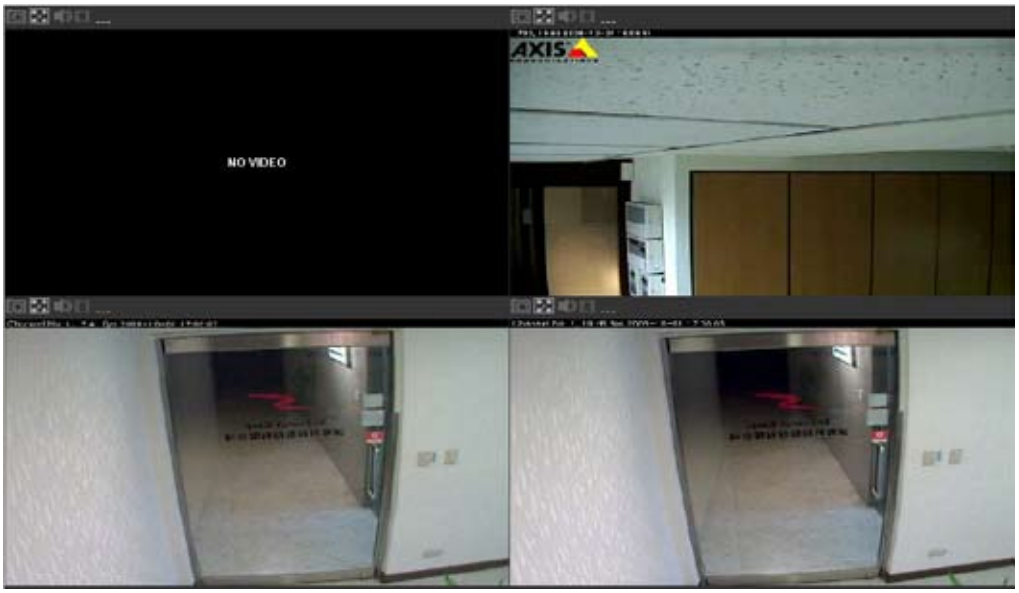


- Click on any blue cell box should direct you to the hour/channel table if there were multiple videos recorded during that date:



** Videos from other cameras that are recorded on the same date will also be displayed*

- Click on the cell box again will start playing back the videos if you have reached the end of search results:



- Videos found from other cameras that were recorded at the same time will also be played.

Search by event

- Start by selecting which channel(s) you would like to perform a search on:

** Selected channels will be marked in red*

- Select "Search by event" from the "Search Method" drop-down list and click "Go" to start the search:

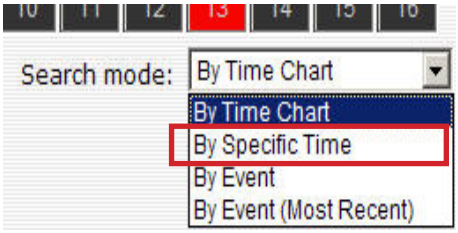
- Results will then be listed like what is shown below (displays the oldest record top down). Click on a particular result to start the playback:

** You can cilck "Next Search" to display the next 15 results.*

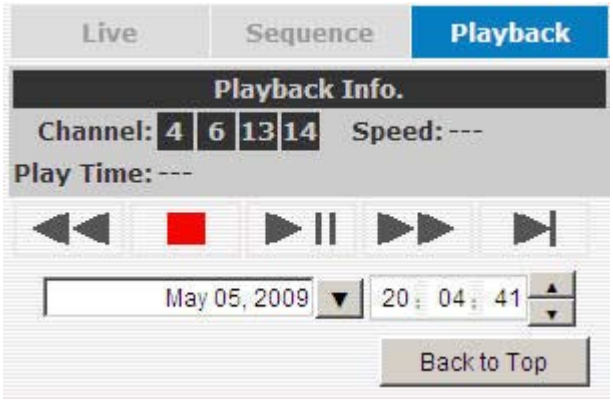
- You may also specify a new start time to search and display results from then on. You can restrict the number of results to be displayed at once (max. 30) and perform the search again

Play by specific time

If you know when a recording was taken place, you may choose the "Play by start time" from the "Search Method" drop-down list



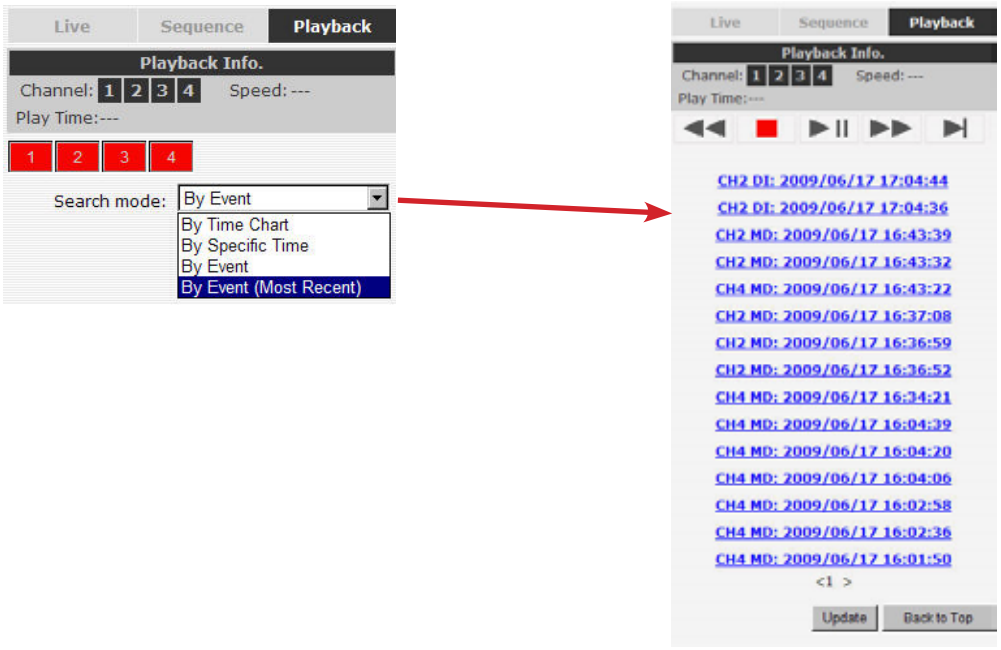
Then you will be prompted to enter a specific time and date for the recorded video.



Use the ▼ button to select month, date, and year

Search by event (Most Recent)

This function quickly displays the most recent event recordings from the selected channels, displaying the most recent result top down. You may click "Update" to update the list to display the most recent result



2.2 Export Playback Videos to AVI Files

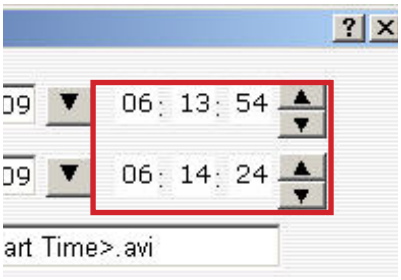
User can export the recorded playback videos stored on SVR-116 to a local computer and save them in AVI file format. The files can then be played on the PC by a 3rd party media player such as VLC player or Windows Media player.

Once you locate the recorded videos with steps described in the previous section, hit the "Export AVI" button on a video window of the video you wish to export.

A new dialog will pop up and allows you to speficy the time frame (or length) of the video you wish to export

Click the ▼ button to pull down the calendar to help you specify the month, date and the year

Specify the starting and ending hours of the video by entering numbers in the text boxes



Hit the "Start" button to start exporting. The file will be automatically named and saved under the C:\ partition

You will be notified once the process is completed successfully

The exported AVI file will be saved under the C partition

** ffdshow is required in order to play the exported AVI file with Windows Media Player. You can get it at "http://sourceforge.net/projects/ffdshow-tryout/" to download the "ffdshow_beta6_rev2527_20081219.exe"*

2.3 Play Export Playback Videos with NVR Media Player

You can also use the SEEnergy NVR Media Player to play the exported AVI files. This can save you the trouble of installing third-party media player or codecs when playing the exported AVI videos.

The NVR Media Player will be automatically installed after the CMS software is installed. You can launch the player under "Start" >> "All Programs" >> "SEEnergy Corp" >> "Pi-Vu Central Basic" >> "NVR Media Player"

Click "Open" >> "AVI File"

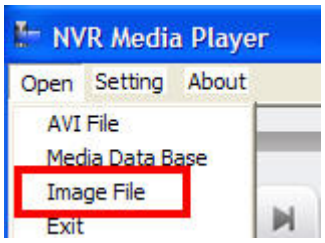
Locate the exported AVI file, and click "open". (normally under "C:\ExportFolder)"

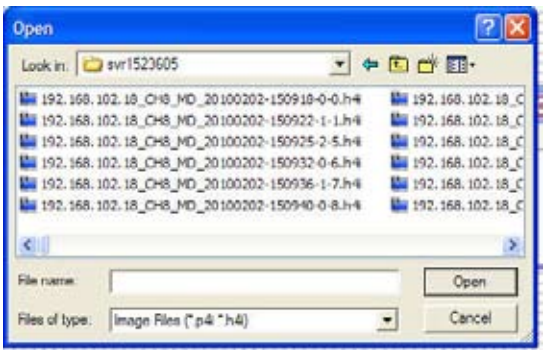
The video will then start playing

2.4 Open Event Snapshot images with NVR Media Player

The NVR sends snapshots that are taken when an event occurs to a destined FTP server or mail recepient. These type of snapshot images are saved in a proprietary image file format, h4i or p4i, and can only be opened by the NVR media player.

To do so, Select "Open" from the top menu then select "Image File". A new dialog should be displayed which lets you locate the image file.



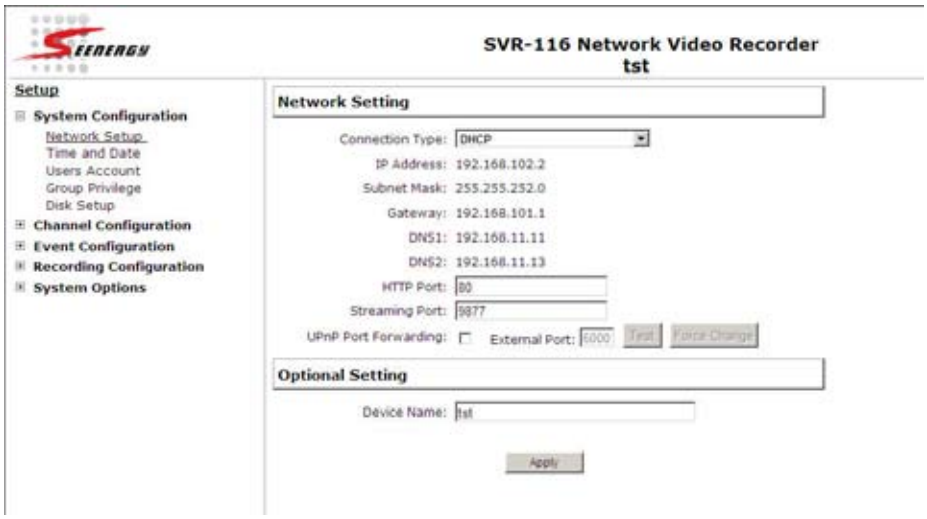


3. System Setup

3.1 System Configurations

The "System Configurations" page provides users options to setup the device quickly and properly. After properly configuring all settings in all the sub-pages, users should expect a fully working network video recorder that is ready to manage cameras on the network. We will start by configuring its network settings to make sure it works correctly in your network. Next, we will help you adjust the system time so videos will be recorder with correct timestamp. To better secure the system for unwanted disturbance, we will guide you on setting up user's account and privileges to prevent settings gets altered by users other than the system administrator. Lastly, we will tell you what you should expect after installing a hard disk and how to prepare the hard disk for the video recording.

3.1.1 Network Settings

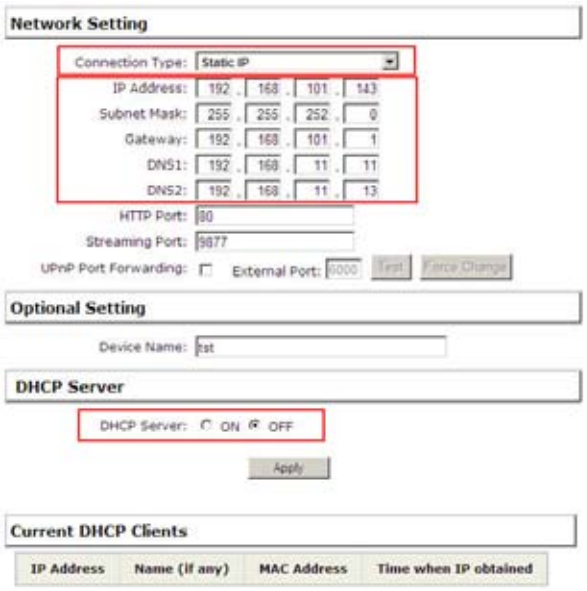


You need to adjust settings in this page for the device to work properly in your network. It is critical that settings here are configured correctly based on your network configurations so that the recorder can be administered through the local area network and cameras can be connected from it.

By default, the recorder is set to obtain IP address from DHCP server, it should be sufficient in most network environments, and most likely you should not need to alter anything in this page. To locate the recorder, simply use the SEEnergy IP Utility with steps described in page 12.

If you wish to set the recorder to use a static IP address in your local area network,

1. Choose "Static IP" from the "Connection Type" drop-down menu
2. Enter the IP address, subnet mask, default gateway address and DNS server address for the recorder
3. Enable "DHCP Server" under "DHCP Server" if you wish to use the recorder as a DHCP server, or leave it disabled if there is already a DHCP server in the network
4. Click Apply for the settings to take effect


Network Setting
Connection Type: Static IP
IP Address: 192 . 168 . 101 . 143
Subnet Mask: 255 . 255 . 252 . 0
Gateway: 192 . 168 . 101 . 1
DNS1: 192 . 168 . 11 . 11
DNS2: 192 . 168 . 11 . 13
HTTP Port: 80
Streaming Port: 9877
UPnP Port Forwarding: External Port: 8000 Test Force Change
Optional Setting
Device Name: rst
DHCP Server
DHCP Server: ON OFF
Apply
Current DHCP Clients
IP Address
Name (If any)
MAC Address
Time when IP obtained

The recorder can detect the presence of a DHCP server upon startup. It sets itself to use static IP address if there is no DHCP server currently presented in the network. Its DHCP server function is also turned on at the same time to assign IP addresses to cameras that are later connected to the network

o You can manually turn off the DHCP server function if you wish to use a separate DHCP server

Change the recorder's IP address would require the recorder to restart. Restart the device under "system Options" >> "Maintenance" for the settings to take effect.

3.1.2 Time and Date

Set the time and date by selecting the time zone according to your location. It is imperative that you set the recorder's time correctly to avoid the following errors:

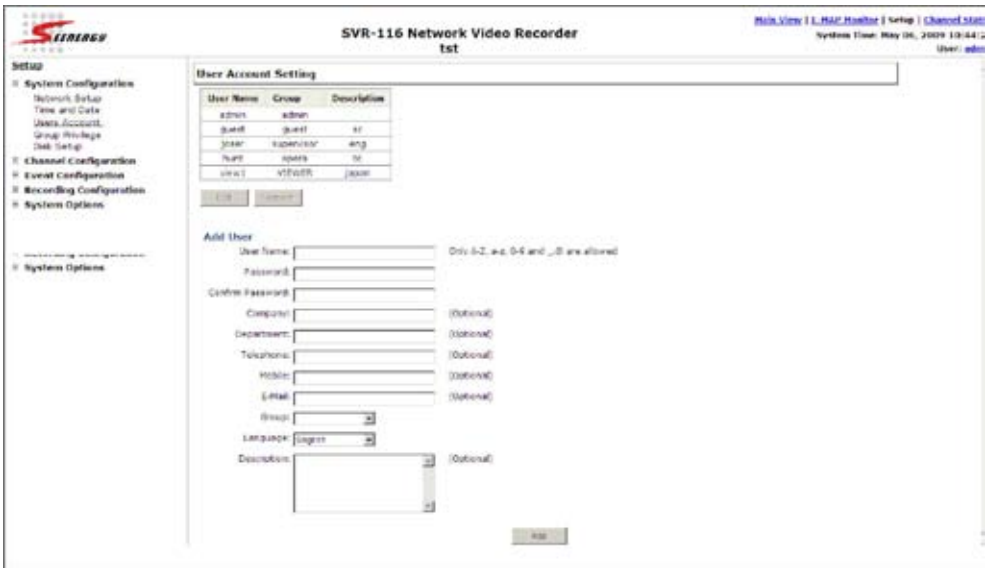
• Incorrect display time for playback videos
• Inconsistent display time of event logs and when they actually occur

After selecting the time zone, choose an option below to set the recorder time

• **Manual** – Use the drop-down list and configure the time manually
• **Sync with NTP server** – enter the hostname or IP address of a valid NTP server and set how often the recorder should synchronize the time with it by using the "Update interval" drop-down menu
• **Sync with PC** – Check this option to synchronize the recorder time with the PC that you are currently using to access the recorder

3.1.3 User Account

The recorder can be accessed by multiple users simultaneously. You can add, remove, and edit users by using options provided in this page to keep user information organized. Each recorder comes with a built-in "admin" account with password "admin". It's highly recommended to change the password upon your initial login.



To change the password of the "admin" account:

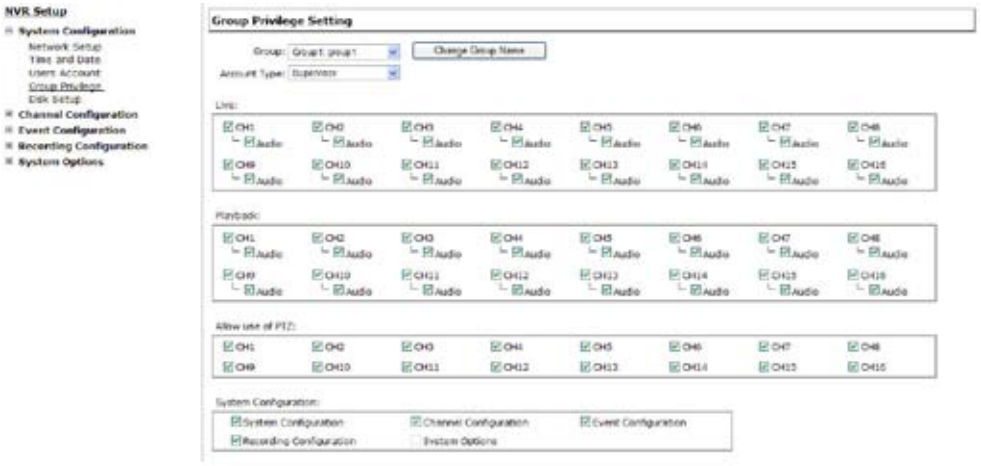
1. Click and highlight the "admin" account in the account list and click "Edit"
2. Its information should be displayed in "User Account Information"
3. Enter a new password in the "Password" field and enter it again in "Confirm Password"

To add a new user:

- Enter a username and password in "User Account Information". All other fields are optional for your own reference.
- Select a group from the "Group" drop-down menu to assign the new user to a particular group
- Enter a short description for the account if you wish
- Click "Apply" to finish configuration

3.1.4 Group Privilege

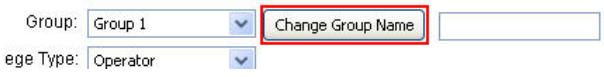
Group Privilege is where you can create multiple customized access policies for situations if you need the recorder to be accessed by users other than the administrator. You can do so by creating a group, and then remove access privileges for certain configuration pages or cameras. Users that are created and assigned to this group will have limited access instead of full administration rights.



The recorder comes with seven built-in groups and five built-in privilege profiles, except the "admin" and the "guest" accounts; the other five groups are fully customizable or you can simply assign a group with one of the default privilege profiles. You can, however, assign more than one users to the "admin" account if you wish to do so. The guest account comes with a "view-only" privilege in the "Live View" page, and users in this group do not have the power to make any changes in the "Live View" page or have access to pages other than the "Live View" page.

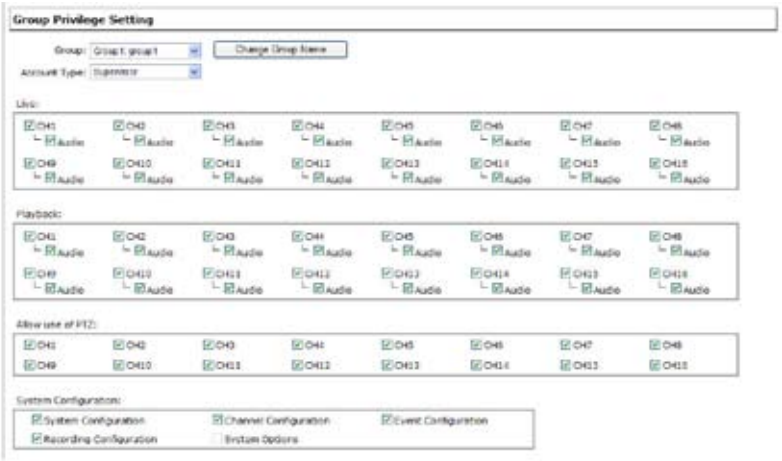
To create a group, select a group from the "Group" drop-down

You can change the group name by clicking the "Change Group Name" button. A text box will be displayed for you to enter the new group



Choose what type of privilege you would like this group to have from the "Privilege Type" drop-down menu

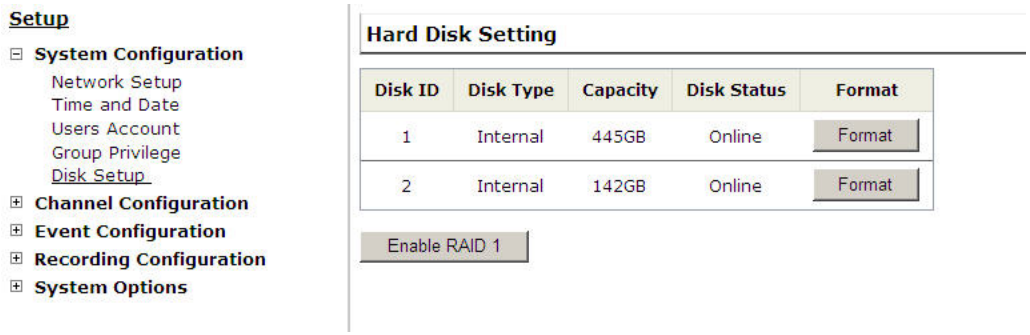
Its access privilege will then be displayed. You can alter its settings by allowing or denying access to other cameras using the checkboxes instead of accepting the defaults



3.1.5 Disk Setup

Once you install a hard disk to the recorder, you would need to initialize it so that it can be ready for recording. You can obtain basic information about the disk you installed in this page

To initialize it, simply click the "Format" button



You can also connect external USB thumb drive to the recorder for firmware upgrade.

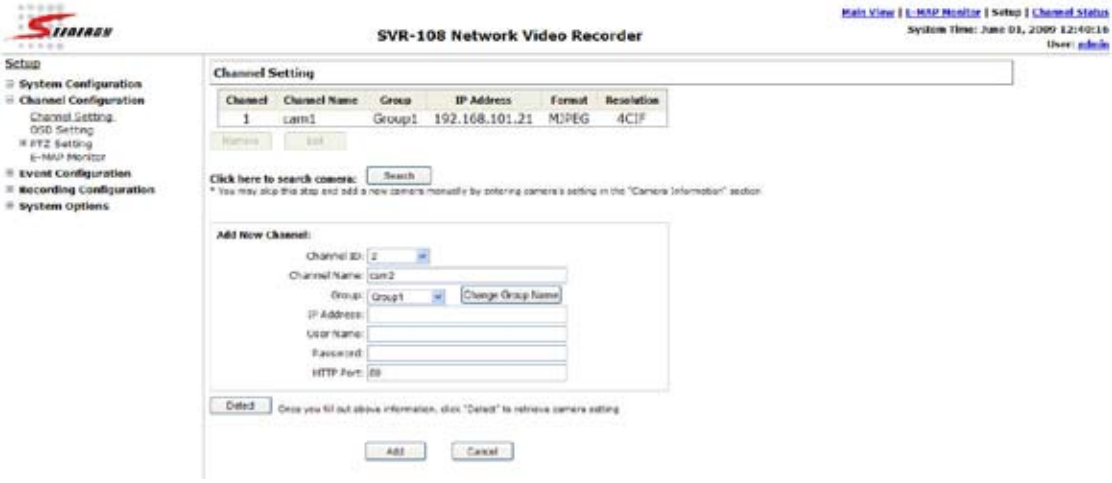
For instructions to install a hard disk to the recorder, refer to page 9

To obtain detail information about the disk, go to "System Options" >> "Disk Status"

3.2 Channel Configurations

3.2.1 Add a Camera

The NVR provides two options for adding a new camera. Users have the option to let the recorder automatically find the cameras or it is possible to enter camera's information and add it manually.

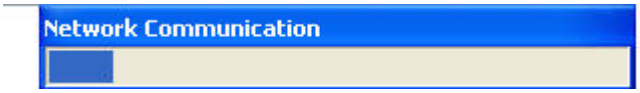


Automatic Search:

1. Click the "Search" button to perform the camera search. You should be prompted to install Active Control component in order for the search to function properly. Go ahead and click "Install"

Internet Explorer - Security Warning
Do you want to install this software?
Name: ActiveX Control of Media Client
Publisher: Seenergy Co., Ltd.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

2. After that, the search should begin and its status should be displayed:

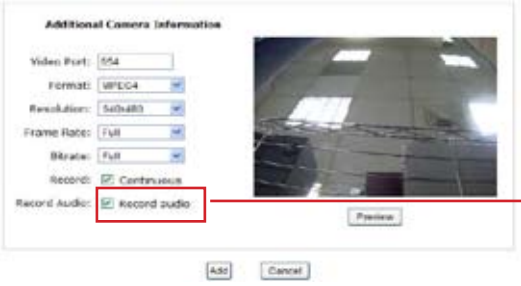


3. Found cameras should be listed and simply select a camera from the list and press "Configure"

AXIS P3301 192.168.101.86 80
Configure
*Select a camera from search result and click "Configure" to configure setting below.

4. Its corresponding information should be displayed in the "Camera Information" section. Enter its username and password and select the channel ID and name the camera.

5. Click on "Detect" to establish connection between the recorder and the camera. If connection establishes successfully, camera's detailed information should be polled and displayed as below

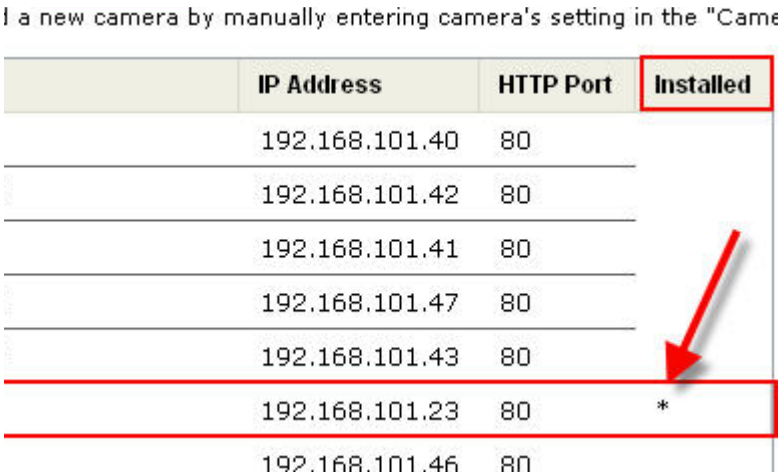


** Audio from this channel will not be recorded if this option is unchecked*

6. Adjust its video format, frame rate, resolution or bitrate…etc if you wish. You can also click on the "Preview" to preview the live video of the camera.

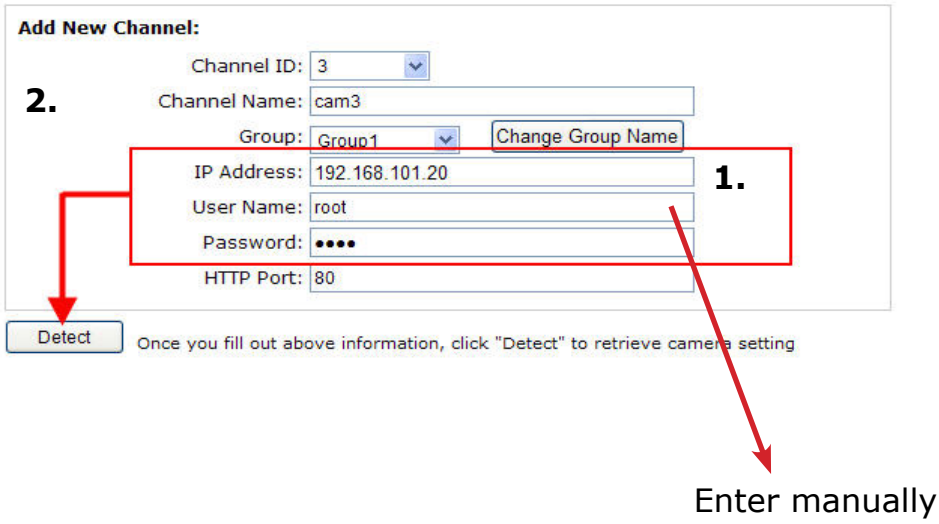
Click "Add" to finish adding the camera

If cameras are marked with "" in the search result, it means those cameras are already configured and connected to SVR-116.*



Add a camera manually

Simply follow the instruction described above but instead of using the "Search" function, enter the camera's IP address and credential in the "Camera Information" manually, then follow step 5 ~6 described above.



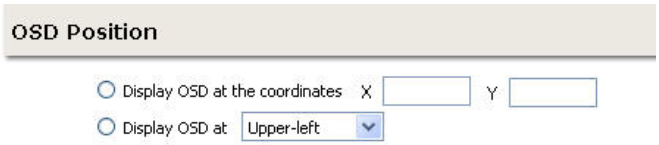
3.2.2 OSD Settings

The OSD (On Screen Display) allows users to add informational text message and embed it onto the video. By default, this function is turned off. To add texts to one or more videos,

1. Select a camera you would like to add text to and choose "Display OSD"

2. Choose one or more display options if you would also like the recorder to automatically embed the system time or the frame rate for you. Or simply choose to display a custom message of your own

3. Next, define where the text will be displayed by either entering an X/Y coordinate or use the system pre-defined position from the drop-down menu

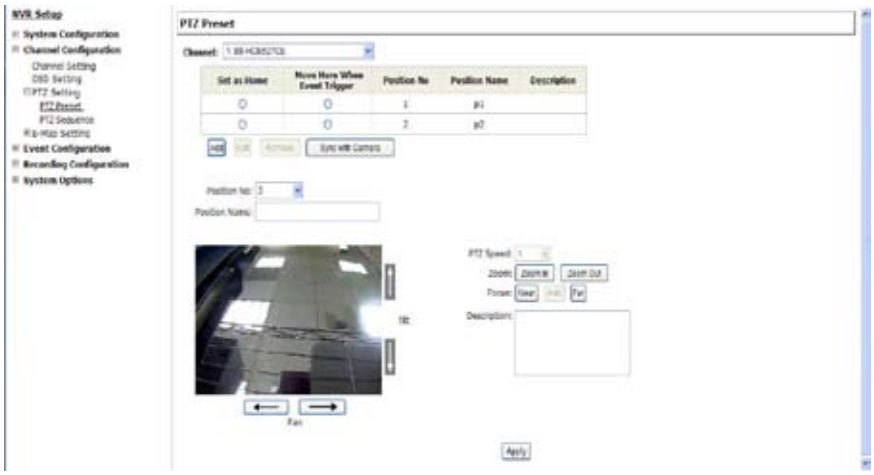


4. Click on the "Preview" button to see the preview of your setting and click "Apply" to save the configuration

- *The texts can be further adjusted with changes to different size, color or font so they can be more visible on the video*

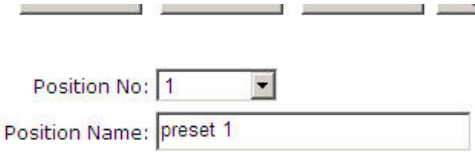
3.2.3 PTZ Preset Settings

The recorder supports PTZ cameras and can set multiple preset points or retrieve and manage preset points that are set in the camera. This is helpful if you need to monitor multiple spots in one area from a particular camera.



1. To set up PTZ preset points, select a camera from the "Camera" drop-down menu and click "Add"

2. Select a position number for the preset point from the "Position Number" drop-down menu and fill in a name in the "Position Name" field for easier identification



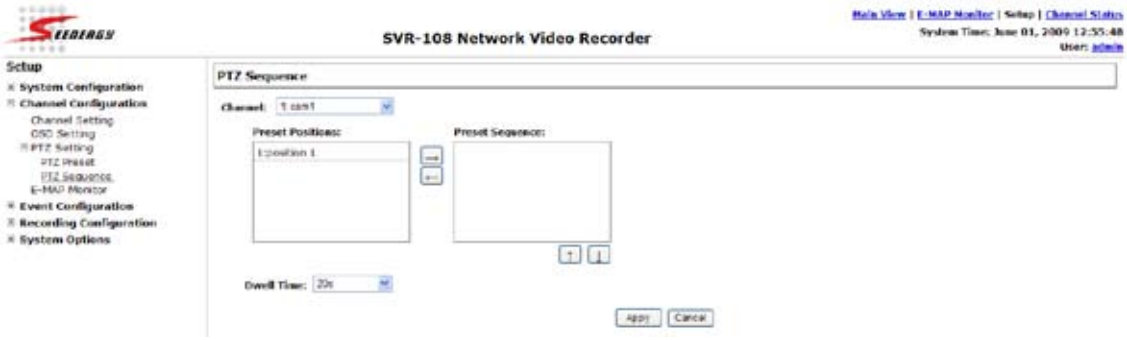
3. Use the PTZ control provided in the configuration page to set the preset point

Ultimately, you can choose to make this preset point a "Home" point among all other preset points, as well as making the camera to move to this particular point when an event is triggered.

- *"Move Here when Event Trigger": In order for this function to work properly, please also complete configuration in "Event Configuration" >> "Event Trigger"*

3.2.4 PTZ Preset Sequence

Once you have multiple preset points defined for a camera, it is convenient for monitoring to set up the sequencing viewing among those preset point and let the recorder automatically switch between them for you.



To configure preset sequence for a camera, select a channel from the "Channel" drop-down menu

The available preset points should be listed in "Camera Presets" section

Pick the ones you like for sequence viewing and press the "->" button to move them to the "Preset Sequence" section, then use the up and down buttons to adjust their sequencing positions.

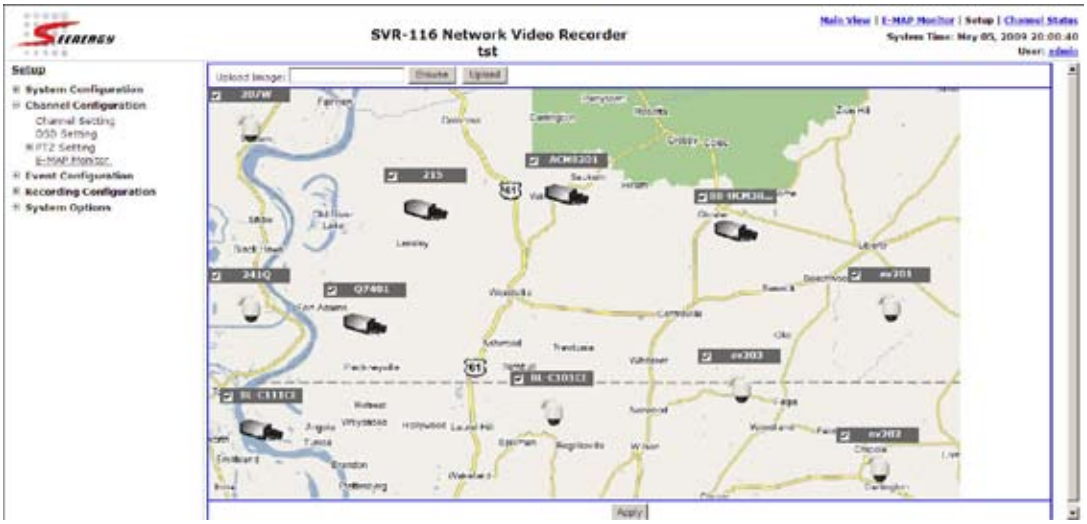
Finally, select a dwell time from the drop-down menu and click "Apply" to save the configuration

• *To start preset sequence viewing, check page 21 for instructions*

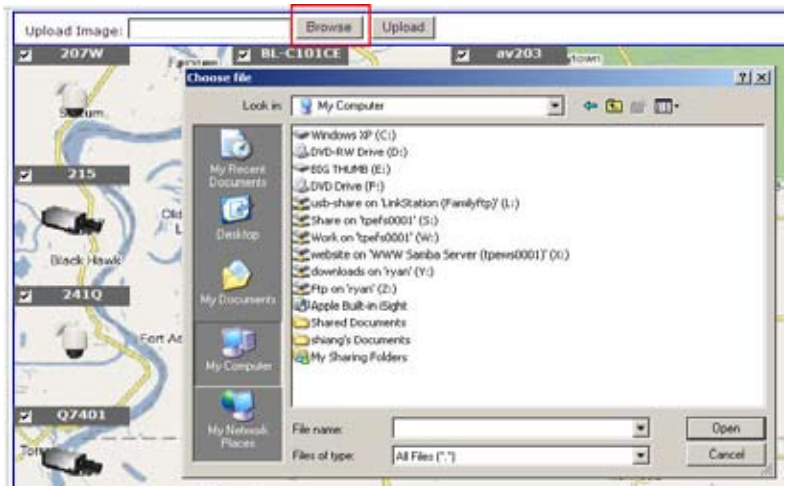
3.2.5 E-Map Setting

3.2.5.1 Local Map Setting

E-Map monitor is a function that alerts users whenever there is an event triggered (e.g. motion detected) from a camera with a geographical perspective. With this function, users can quickly identify which camera has detected an unusual event and where this event is happening. This function works by incorporating the event detection function as well as the recording function, which, as a result, helps users take all the necessary actions when an unusual event occurs.

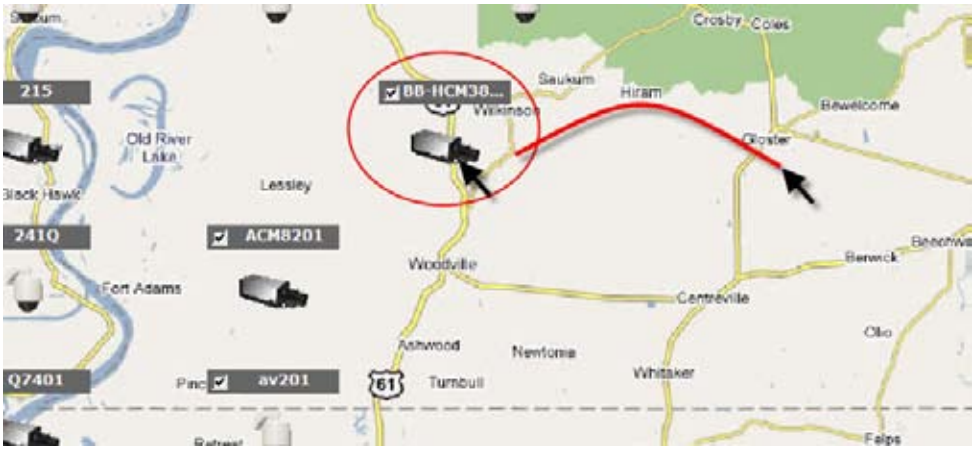


To replace the map, click "Browse" button to locate the new map image file from the local PC and then click "Upload"

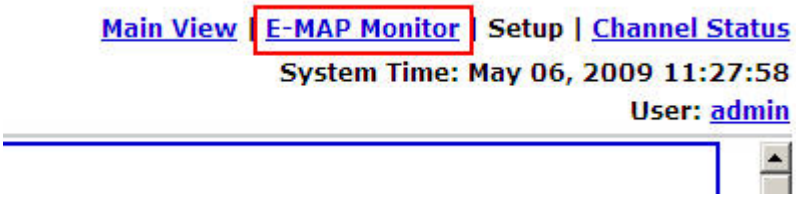


• *Only JPG, PNG, and GIF file formats are supported with file size under 100KB*

Then click and drag the camera icon to move the camera to define its location.



Access the E-Map Monitor page from the upper-right hand corner menu



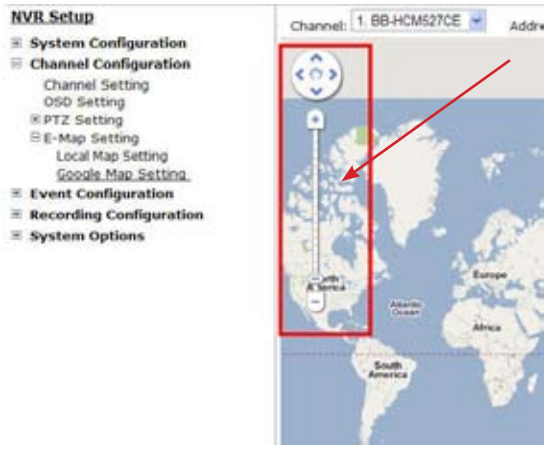
When the NVR receives an event triggered from any of the cameras, their videos will be displayed on the E-Map and you can double-click on the video to enlarge it

3.2.5.2 Google Map Setting

The Google Map monitor is a similar function to the aforementioned E-Map monitor. It is useful if you are managing multiple cameras from different locations.

To configure locations of each camera, first determine the location you'd like to place the camera to on the map. You can do so by:

1. Zoom in to a smaller area by using the zoom control bar on the map
2. Zoom in to a smaller area by using the mouse scroll button



You can also go to a specific place on the map by entering its address or the name of the place in the "Address or places of interest" field:

Once the location has been determined, click and drag the camera icon to move it to the desired location:

** Click and drag the icon to re-arrange its location*

- *The Google Map Monitor requires active Internet connection and can not be used in conjunction with the regular E-Map monitor function.*
- *You can click anywhere on the map and hold down the mouse left button then drag to move the map itself*

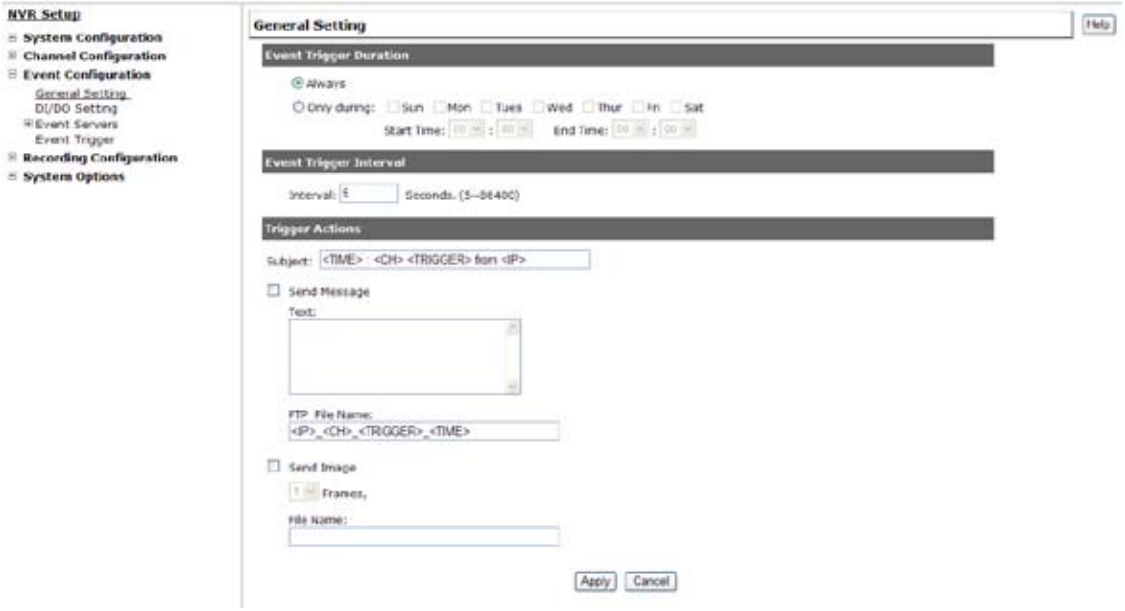
You can then access the Google Map Monitor from the top menu:

3.3 Event Configurations

The "Event Configurations" section allows users to define conditions that constitute an event, its corresponding trigger action and when it will be triggered. Such setting can reduce the management overhead and notify the administrator only when it's necessary.

3.3.1 General Settings

The general settings section can help you quickly configure when an event is triggered, how often events are triggered and the corresponding actions when events are triggered.



Start the event configuration by defining the general settings:

Define when an event will be triggered

• Choose "Always" or "Only during…" under "Event Trigger Duration"

• For the "Only during…" option, choose the days by using the checkbox and then define the time range in those days in the "Start Time" and "End Time" fields that you would like the event trigger function to be enabled.

How often an event is triggered

• Set a time interval under "Event Trigger Interval" to define how often events are triggered

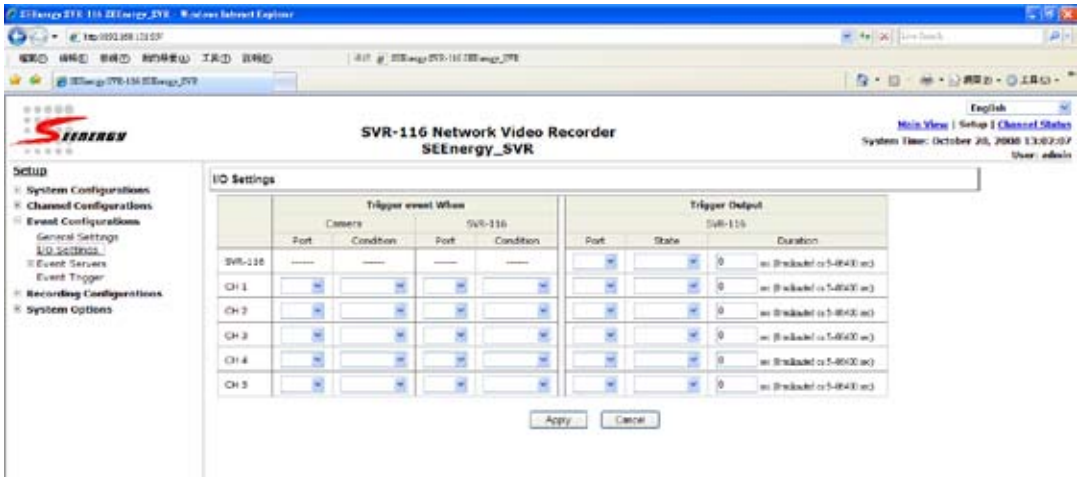
Trigger action

Now that you have the event trigger duration and interval defined, choose what action to be taken during an event trigger:

• You can choose to have the recorder send out the first few frames of the video recorder upon an event is triggered
• You can also choose to have the recorder send out a warning message in e-mail or in txt file format and upload it to an destined FTP server

3.3.2 I/O Settings

This function allows users to manage camera's digital input and output ports right from the recorder. You can setup the recorder to receive triggers from a particular camera's input port and trigger a device, such as an alarm that is connected to the recorder or camera's output port. Cameras that do not have built-in digital input/output port can also be configured to pair with the recorder's DI/DO ports.



1. For cameras that come with physical digital input ports, their ports will be listed in the far left drop-down menu.
2. Pick the desired channel for I/O mapping, and then select the camera's input port from the drop-down menu.
3. Select the trigger condition from the "Condition" drop-down menu.
4. Select the recorder's input port if you would also like to use the recorder's input port for event trigger. And then select the trigger condition as well.
5. Next, select the recorder's output port and define its trigger state
6. Finally, define the trigger duration.

The recorder does not control camera's input or output ports in a way to let you pair recorder itself with a camera's input or output port for event receiving or triggering.

The recorder only acts as a medium for pairing up input/output ports between cameras and the recorder.

Only connected cameras will be displayed in the list.

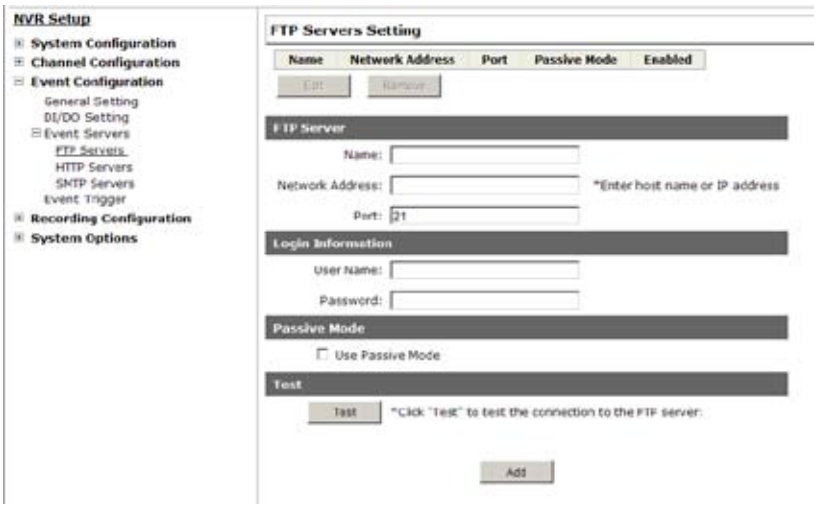
Some cameras only allow one trigger source be configured at a time, e.g.: if the camera has the motion detection function turned on, its digital input will be disabled and vice versa. Under such circumstance, if you set to use camera's digital input port as the event trigger source, you will not be able to select motion detection as the trigger source for this camera under "Event Configurations" >> "Event Trigger" setup page.

** The image(s) that are uploaded to the destined FTP server or emailed to a destined mail recepient are in their own proprietary image file format (.h4i or .p4i), which can only be opened by the NVR media player. For deails, please refer to page 40.*

3.3.3 Event Servers

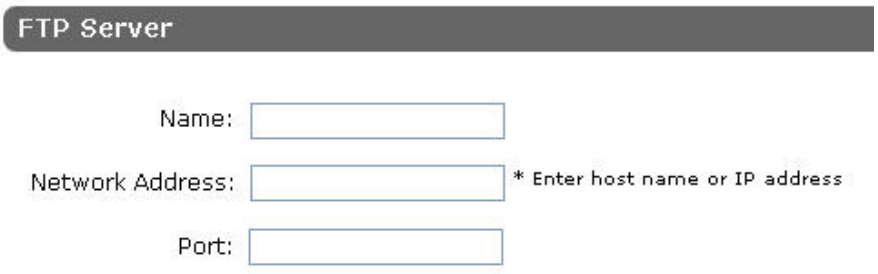
Event servers are to be used with event trigger actions. In case of unusual motion detected by the camera or a disk failure, the recorder can send notification with the acceptable format (image/txt) to a destined event server according to the configuration.

Configuring an FTP server



To add an FTP server,

1. Start by giving a name to the server that you are adding to the recorder
2. Enter the hostname or the IP address of the FTP server
3. Enter the communication port of the FTP server (usually port 21)



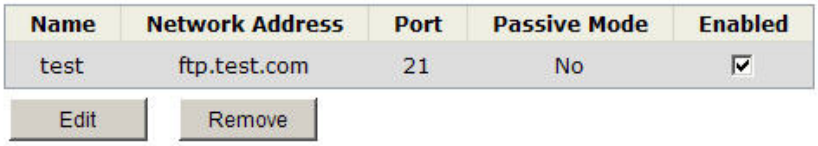
4. Enter the username and password of the FTP server if it's required

5. Check "Use Passive Mode" if it's required or leave it unchecked to use active mode

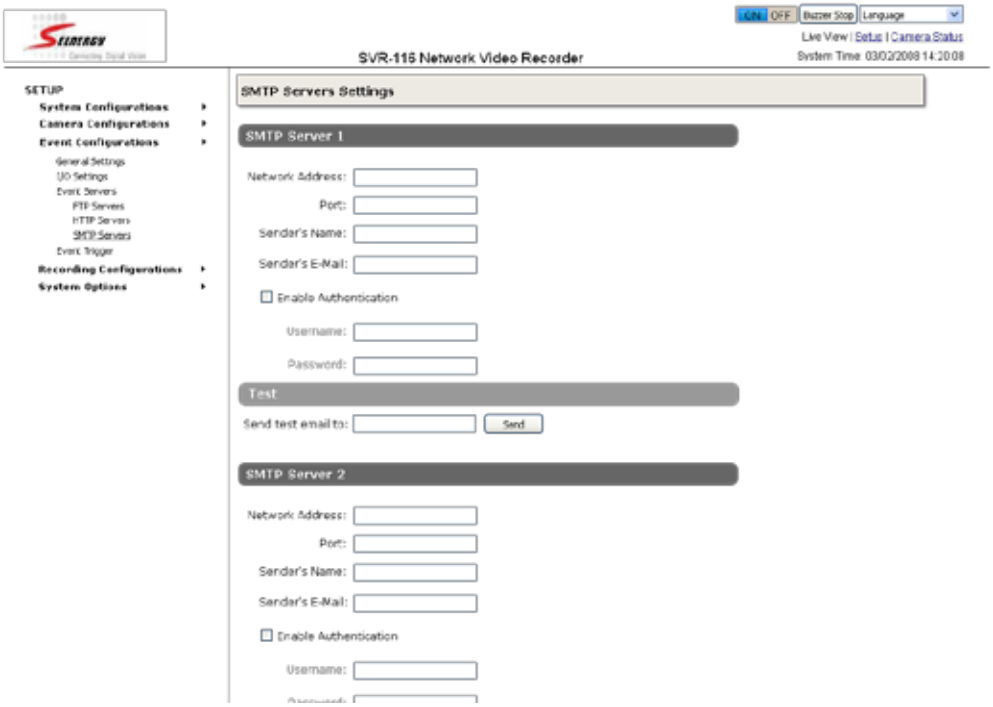
6. Click "Test" to verify if all information is entered correctly and the connection to the FTP server can be established successfully

7. Click "Add" for the settings to take effect

If you wish to edit/remove/enable/disable an FTP server, click to highlight one from the profile list and choose the corresponding action button/checkbox



Configuring an SMTP server

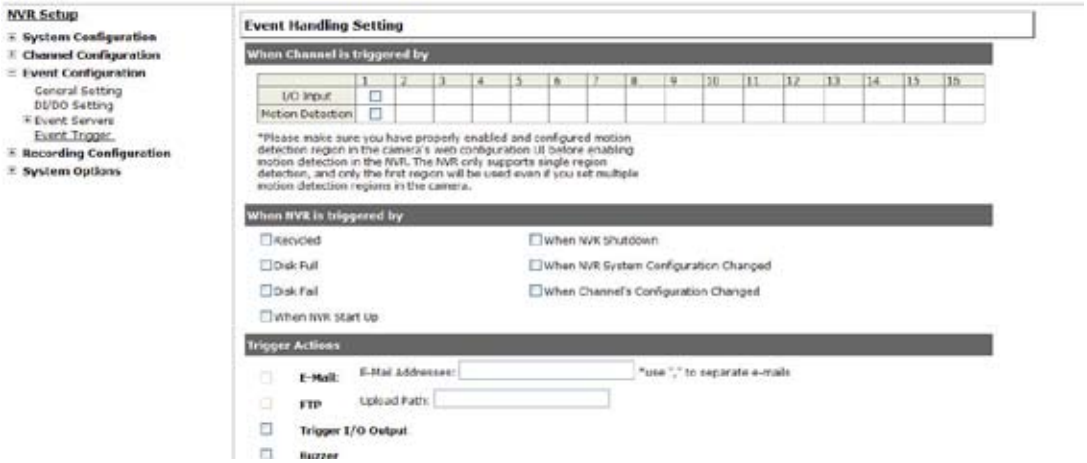


1. Enter the hostname or the IP address of the SMTP server
2. Enter the port of the SMTP server
3. Specify the sender's name in the "Sender's name" field
4. Enter the sender's e-mail address
5. Check "Enable Authentication" and enter the username and password of the SMTP server and as it requires authentication
6. Click "Apply" to save the configuration

3.3.4 Event Triggers

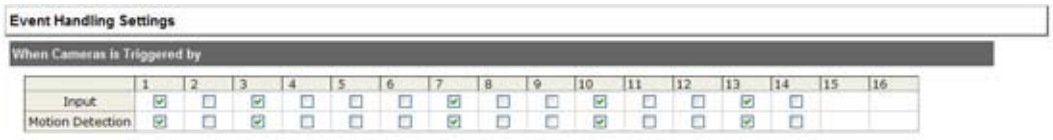
We have finished defining how an event will be triggered and which servers will be receiving notifications in the previous two sections, now we can finish up the event configuration by setting:

- which channels will have event trigger function enabled
- What is considered to be an event
- Where the warnings will be sent to and how they will be sent



Select Channels to Enable Event Trigger and which type of event should be triggered

- Use the checkbox to enable event trigger on the desired channels



** Once motion detection is enabled in this page, please configure the motion area and enable motion detection in the corresponding channels (cameras). The NVR only detects the first motion area set in the camera. The NVR recognizes the first motion area by its ID number set in the camera.*

- Define which system events should trigger the recorder to send out notifications

- Define how the notifications will be sent and where they will be sent to

** Event trigger may not work for cameras that are placed outside of your local network or on the Internet until the "UPnP Port Forwarding" is enabled in both the NVR and the router.*

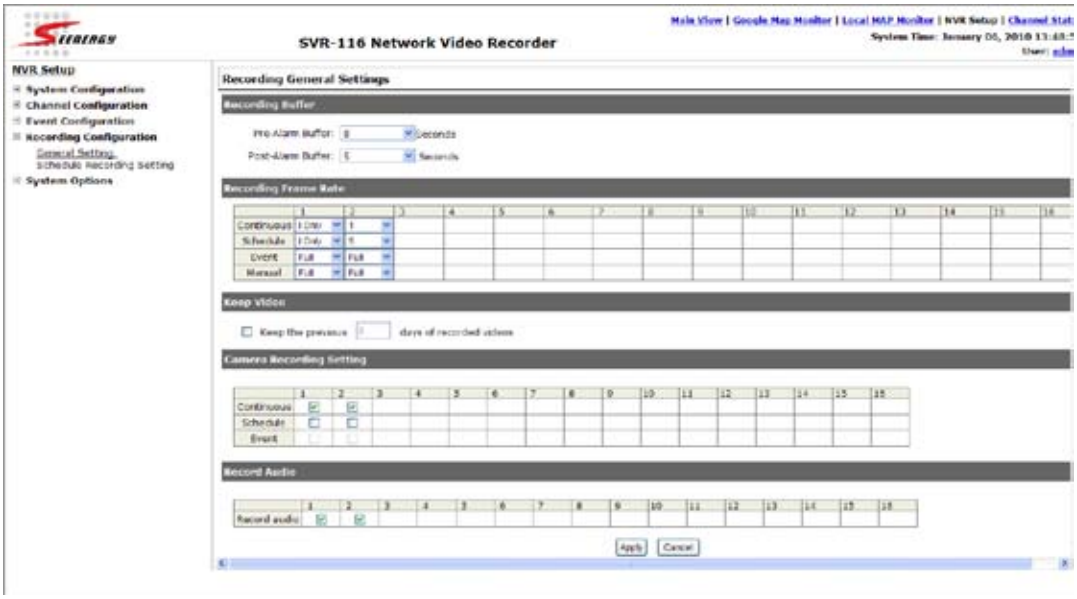
3.4 Recording Configurations

The "recording configurations" gives users the overall control of how and when a recording is performed and the quality of different types of recordings performed on each channels. It can help the recorder to operate with sufficient system resource by performing recording only when it's necessary with adjustable recording frame rate.

3.4.1 General Settings

You can define the following in "General Settings":

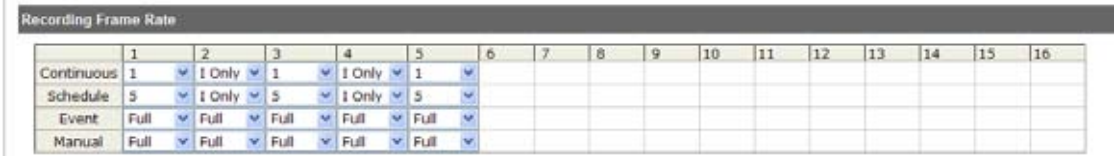
- Pre-Alarm/Post-Alarm recording length
- Recording frame rate
- Enable/disable different recording types on different cameras
- Enable/disable audio recording



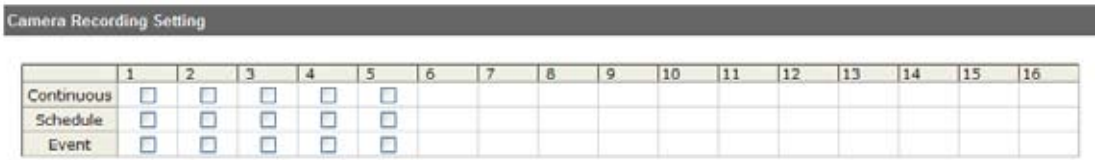
The "recording buffer" allows user to define "pre-alarm" and "post-alarm" time for event recordings. The "pre-alarm" time sets the NVR to record in advance when an event is triggered. The "post-alarm" time sets the NVR to continue recording for a period of time after an event trigger is finished.

** The "Pre-alarm" function only works when the "Continueous" recording is also activated.*

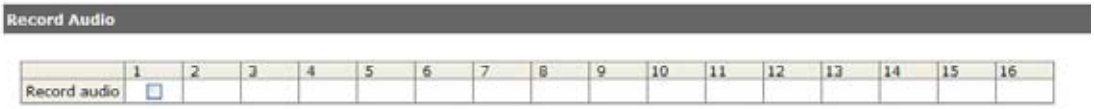
Recording frame rate allows you to set different frame rate for different types of recording instead of recording at one frame rate only. Use the drop-down menu and select one of the pre-defined frame rates for a particular recording type


Recording Frame Rate
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Continuous 1 I Only 1 I Only 1
Schedule 5 I Only 5 I Only 5
Event Full Full Full Full Full
Manual Full Full Full Full Full

The "Camera Recording Setting" section allows you to turn on or off a particular recording type on any channels.

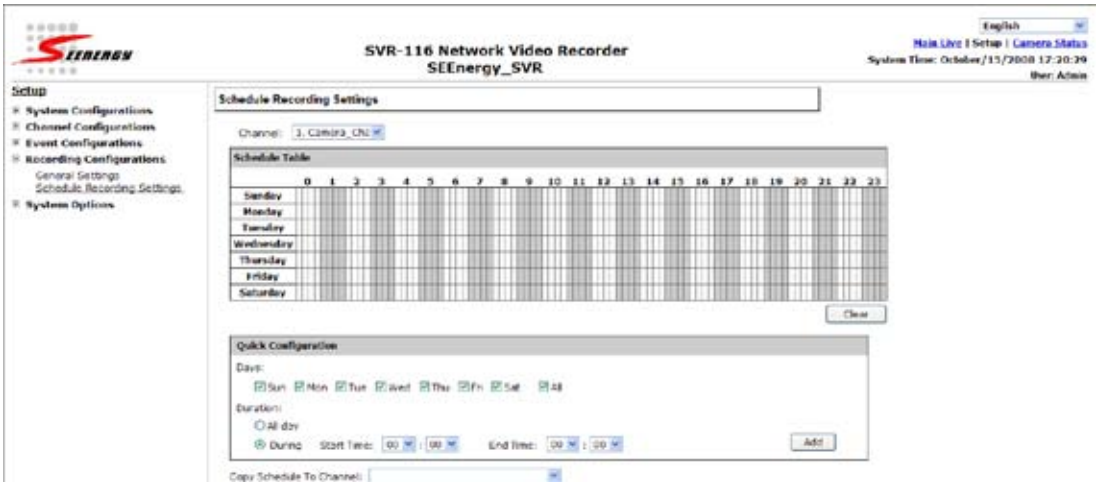


The section at the bottom of the page allows you to disable audio recording (record video only) of particular channels.



3.4.2 Schedule Recording

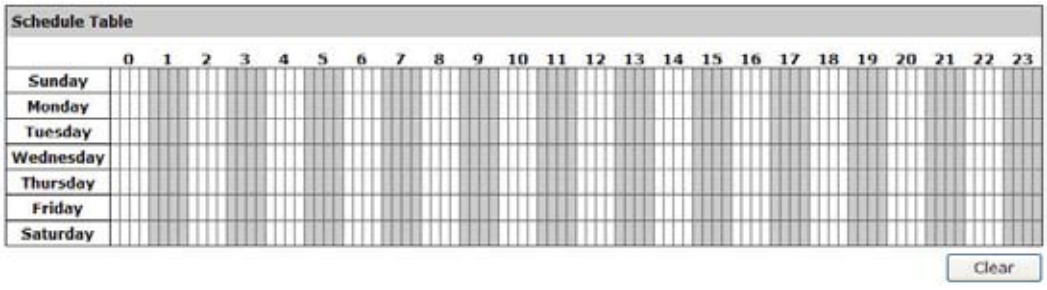
Here you can define the time range of the schedule recording for all channels.



To configure a schedule recording:

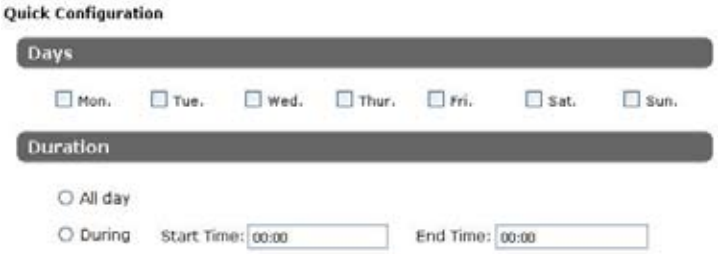
1. Use the "Channel" drop-down menu and select a camera first

2. You can use the schedule table to set the time range. Click the cell boxes then move horizontally lets you set what hours to perform recording during a day. Click and move vertically lets you set what days to perform recording at a specific time.



** Each cell box represents 15 minutes of time. Click one or more boxes to omit consecutive recording*

3. You can also use the "Quick Configuration" to define recording time range instead of clicking cell boxex one by one on the time table. Simply check what days you would like to perform recording and specify the recording duration by either choosing "All Day" or enter a start and end time for specific recording duration.



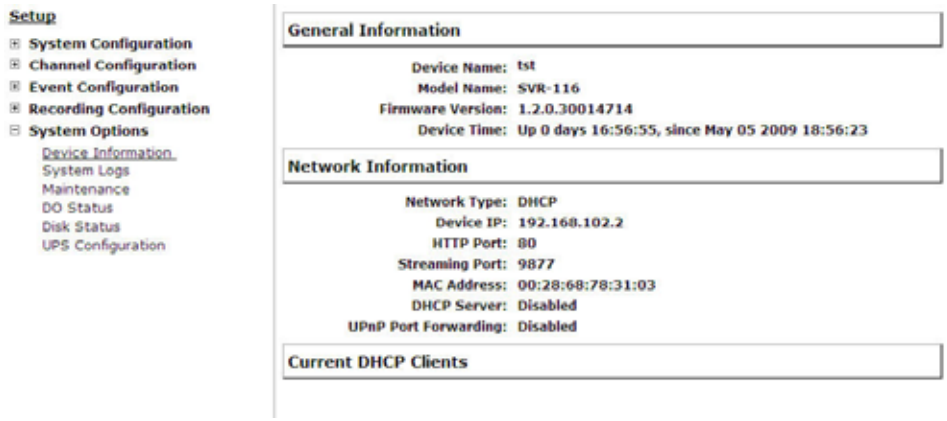
4. Select the "Copy to" option if you would like to set the same recording schedule to another camera.

3.5 System Options

System Options gives users a glance of the overall system status and allows users to perform maintenance tasks such as upgrading firmware, restore/backup device settings or reboot device ….etc.

3.5.1 Device Information

The "Device Information" provides the general information of the device such as firmware version and system time. It also provides information of the current network settings and status.



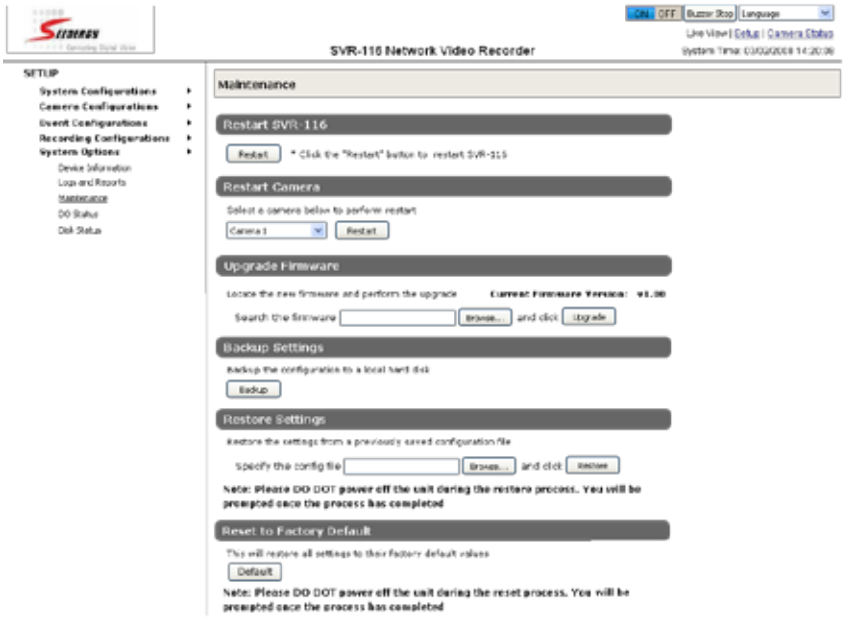
3.5.2 Logs and Reports

"Logs and Reports" keeps a record of what's been happening to the device and provides basic information for troubleshooting

3.5.3 Maintenance

"Maintenance" provides functions for users to:

- Reboot the NVR when necessary
- Reboot cameras directly from the NVR
- Perform Firmware Upgrade
- Backup the NVR's settings to a local hard drive
- Restore the NVR's settings from a previously saved configuration file
- Reset the NVR's settings to their factory default values



Reboot the NVR

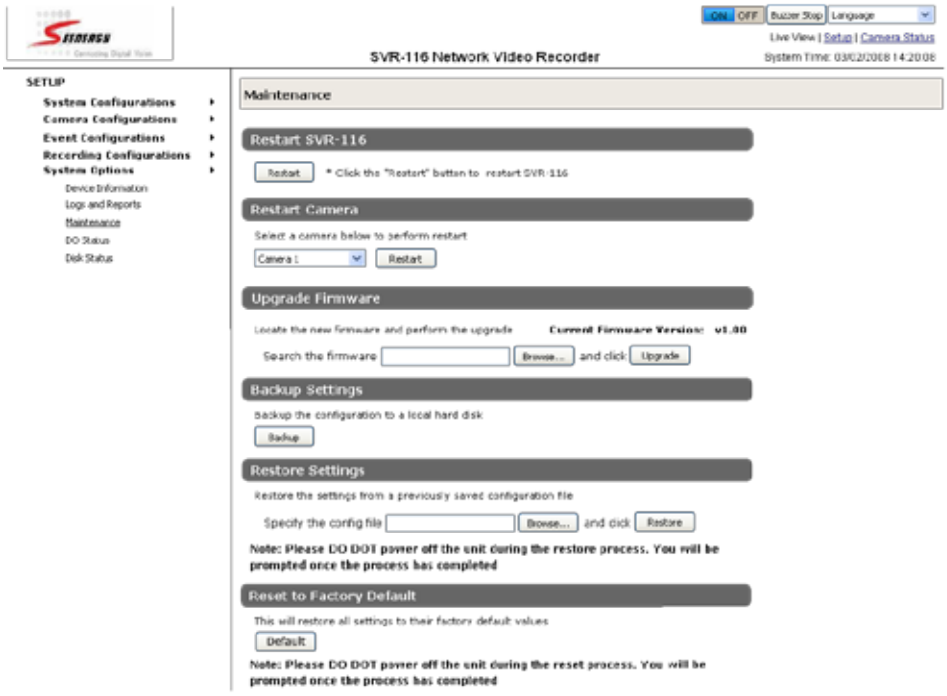
Reboot the NVR after you upload a new firmware. You would need to manually reboot the system for the new firmware to take effect. Such process would prevent a recording from getting interrupted because the system would not automatically reboot itself after the new firmware is loaded onto the recorder.

Simply click "Restart" to begin the reboot process and confirm the action:

The restart process should be displayed and you should be prompted back to the "Maintenance" page after it is complete:

Reset the NVR to Factory Default

To reset the recorder back to its factory default, click "Default" button and begin the proces:



The process should be displayed and you should be prompted back to the "Live View" page after it is complete:

3.5.4 DO Status

This is where you can get the current status of the SVR-116 digital output ports. You can also change their status from this page.

3.5.5 Disk Status

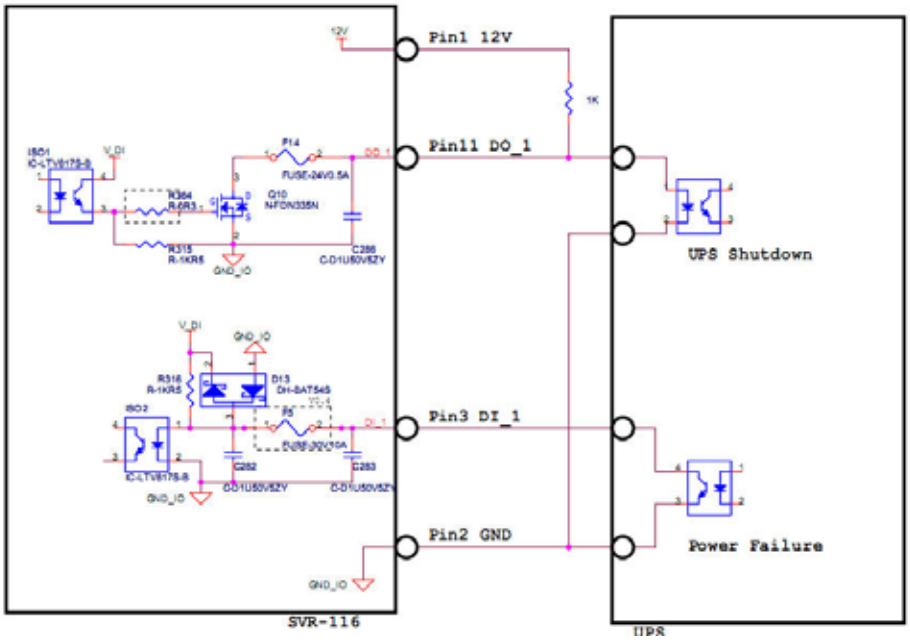
"Disk Status" gives you a more detailed information of the hard drive that is currently installed in the NVR.

3.5.6 UPS Configuration

Connect the UPS to the NVR's DI/DO port for sending and receiving signals between the UPS and the NVR. Refer to the diagram below to connect the UPS with its RS-232 interface to the NVR's DI/DO port.

The NVR can receive signal from the UPS when there is a power failure and shut down itself automatically within a period of time.

Connect UPS with its RS-232 interface to the NVR's IO port:



**** The NVR uses DI_1 to receive signal from UPS system and uses DO_1 to shut it down.***

User's Manual

English

EN/MV15/01272010/001

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Connecting Digital Vision

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